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BERGSON
AND THE
MODERN SPIRIT

GEORGE ROWLAND DOUGLASS, PH.D.

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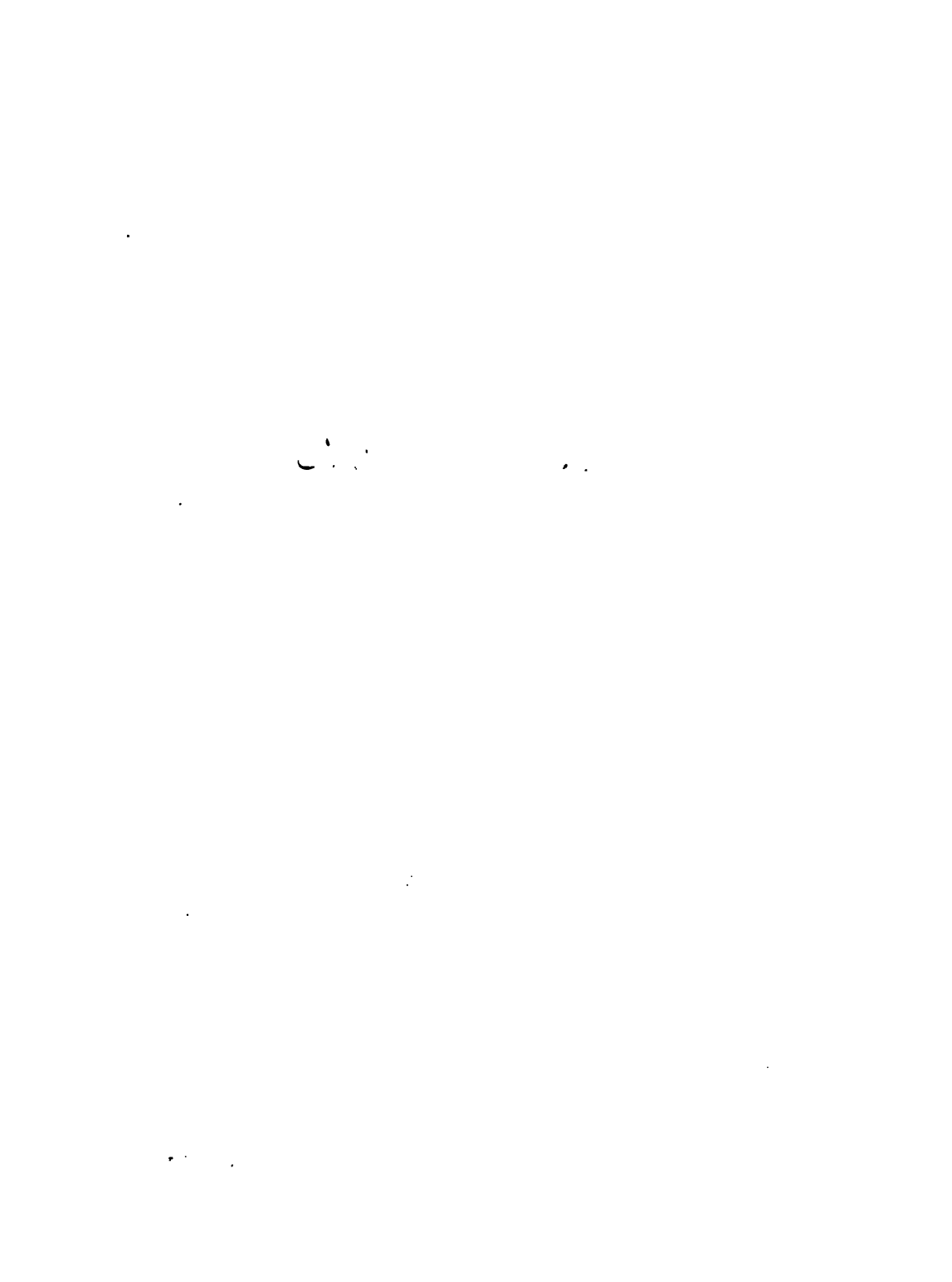


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BERGSON AND THE MODERN SPIRIT

*AN ESSAY
IN CONSTRUCTIVE THOUGHT*

BY
GEORGE ROWLAND DODSON, PH.D.



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CHAPTER I

PHILOSOPHY AND THE AVERAGE THOUGHTFUL MAN

After a long period of neglect and even disrepute, philosophy is beginning to regain the attention of the average man. It is time. We have unduly simplified our lives, so that they tend to consist almost exclusively of business and amusement. Multitudes have been trying the experiment of living without science and art and philosophy and even religion. The experiment was bound to fail, for it meant the pauperization of life. When great interests that should form part of the content of life are ignored, the inevitable result is a sense of dissatisfaction, of futility, and doubt as to whether it is all worth while. Our greatest need is a clear vision of the only life that can satisfy, a life that is informed and disciplined by science and adorned and ennobled by art, that is widened, steadied and strengthened by philosophy, and that comes to flower in the religious spirit of faith, hope, gladness, reverence and love. We must realize that art is not merely for the ar-

tist, that science is not for laboratory investigators alone, that philosophy is not the exclusive business of professional scholars, and that religion is not solely for monks and nuns, but that all of these are for all the people, and that they are indispensable to the average man.

According to the seer of Concord, one of the offices of this age is to annul the divorce between the lovers of truth and the lovers of goodness. Let us hope that it will also succeed in annulling the divorce between all the higher interests of life, and make us vividly realize that they belong together; that they are at their best only when they function together; and that we can neither do without them, nor with any one of them alone. An art that is only for art's sake isolates itself, becomes unintelligible, fantastic, irrelevant and repellent. He who is a philosopher and nothing else is a mere technical quibbler. The man of science cannot afford to denude himself of all interests except those of his special investigation, and religion that is detached from the life which it ought to sanctify loses all that could give it worth. And he who supposes that none of these things concerns him does not know how poor he is. He is like a tree most of whose branches have withered away.

The need of clear, constructive thinking in religion, ethics, politics and social life is becoming urgent. Yet an aversion to systematic

thought lingers, and philosophy, which is essentially a struggle to rise above one-sided ideas and to attain to juster and more comprehensive views, is still regarded with distrust. On the other hand, it must be admitted that this situation is not due to mere perversity on the part of the people. There is some reason for their attitude. They see that what might be called the sporting theory of philosophy at present prevails. Philosophy is a game, carried on by professionals and their pupils. One of the leading professors of the subject recently remarked that it is their business to teach those who are preparing to teach others, so that a lay philosopher is a rarity. Yet it is the laymen, the men and women who are meeting life's problems and carrying on the world's work, who have most need of philosophy. They should find in noble views of reality consolation, strength, serenity, and an elevated joy. If, however, they look for help to current discussions, they find the issues minute and subtle and the language so technical that they cannot understand it. And, when they do get some glimpse of the nature of the questions discussed by experts, they fail to see the relation of the discussions to the great interests they have at heart.

Now it would, of course, be a mistake to depreciate the value of these philosophic subtle-

ties. They have their importance, and there is great joy in playing the game. Moreover, the players are for the most part earnest and sincere. Still, the public has not unnaturally got the impression that the philosophers are a set of critical warriors, who are constantly fighting with one another, who never construct or achieve anything, and whose speculations go round and round without making any real progress. The average man who for any reason takes up a book on philosophy finds frequent reference to other writers, among them the very greatest, coupled with such terms of criticism as fallacy, mistake, confusion, misunderstanding, logical failure, loose generalization, anthropomorphism and provincialism. He has heard, e. g., of idealism and, though he does not understand it, he has supposed it to be something noble and exalted, and it is therefore with some dismay that he reads such a description of it as that of Mr. Hobhouse:—"Indeed, it is scarcely too much to say that the effect of idealism on the world has been mainly to sap intellectual and moral sincerity, to excuse men in their consciences for professing beliefs which on the meaning ordinarily attached to them they do not hold, to soften the edges of all hard contrasts between right and wrong, truth and falsity, to throw a gloss over stupidity, and prejudice, and caste, and tradition, to weaken the

bases of reason, and disincline men to the searching analysis of their habitual ways of thinking."

The recent controversy over pragmatism, for example, is confusing to the public. The movement started with an article by Mr. C. S. Peirce, the object of which was to show how to make our ideas clear. The theory was espoused by Prof. James, and by him and others has been preached as a sort of philosophic gospel which promises deliverance from the metaphysical troubles which have long afflicted our race. The result is that in some respects the fog is greater than it was before. The new method has not enabled those who use it to make our ideas clear as to the method itself, and pragmatism is a term of uncertain meaning. It may signify a theory of knowledge, a theory of truth, an empirical metaphysics, a pluralistic view of reality, an emphasis on the biological method of approach to philosophical problems, or a mere insurgent spirit.

The layman is, therefore, justified in feeling that if the professionals cannot understand one another, he can spend his leisure hours to better advantage than in seeking enlightenment or help in any way from this quarrelsome crew. He may even rejoice in the thought that they escape much trouble who let philosophy alone. Nevertheless, such a conclusion, natural and ap-

parently justified though it be, is for the layman himself most unfortunate. For philosophy is not a thing which men can take up or let alone, as they please. It lies along the path of development, and can be escaped only by those who remain immature. We live at first by instinct, by habit, by the tradition which as children we receive on authority. As we mature, the period of reflection inevitably comes. The faith by which we live must be examined, criticised, rationalized and purified. We continue to believe by instinct, perhaps, but it is no less an instinct or an imperious desire to understand what we believe. "Experience," says Sir Henry Jones, "is a process that changes and grows, and at a certain stage of the evolution of man's rational nature, reflection arises inevitably. It becomes the urgent condition of further development. The future can be faced only in the light of the past which only reflection recovers; and the individual or a nation can achieve a new triumph only if it has learnt the lesson of its own deeds. Reflexion must succeed action and set free its meaning, if better action is to follow."

When a man arrives at this stage, when his experience is becoming reflective and he feels the need of understanding himself, it is a great misfortune for him if the unfavorable impression he has formed of philosophers leads him

to ignore the leading thinkers and the great intellectual constructions of history. It is as if one should despise the achievements of medical science and in all emergencies attempt to be his own physician. We do not think highly of the wisdom of those who without study and experience assume to be physicians, lawyers, engineers and financiers. One of the hardest and most necessary lessons we have to learn is that men are highly specialized in their abilities and capacities, and that the greatest of them are apt to be mere children in the matters they have not specially studied. Their judgments are mature and trustworthy in regard to things with which their experience has made them familiar; but outside of these limits, they have no background for their judgments and are as helpless as schoolboys. I once met an eminent engineer, justly esteemed in his profession and with solid achievements to his credit. By these he apparently set little store. His interest was in telepathy and spiritualism, upon which he seemed to feel competent to have an opinion after reading a few popular works on the subject.

The case is not different with philosophy. The last twenty-five centuries of thinking on the great problems of life have not been without result. And when even a first rate man of science, such as Karl Pearson, affects to despise

the metaphysicians, and then proceeds to construct a psychology and philosophy of his own, the product is only what might have been expected,— crude and superficial. Haeckel, likewise, a mighty man in science, scorning the achievements of the constructive thinkers who preceded him, succeeds by his own efforts in reaching a philosophy which he preaches as a gospel, and of which he is very proud, but which the history of thought shows to have been attained more than two thousand years ago.

Assuredly, we must do our own thinking, but not in isolation. Unless we are to repeat the mistakes which were made and corrected long ago, we must think in the light of other men's thoughts. For the history of philosophy is by no means so profitless as the average man may with some excuse suppose. It is the story of the long climb of human thought through the ages, and those who are to think effectively on present day problems must know something of its course and the net result of it all. The great systems of the past are not obsolete. They are really different views of our many-sided world. Prof. Falckenberg states this truth as follows: "The Greek view of the world is as classic as the plastic art of Phidias and the epic of Homer; the Christian, as eternally valid as the architecture of the Middle Ages; the modern, as irrefutable as Goethe's poetry and

the music of Beethoven. The views of the world which proceed from the spirits of different ages, as products of the general development of culture, are not so much thoughts as rhythms in thinking, not theories but modes of intuition saturated with feelings of worth."

That is, to understand these great interpretations is not only to know something about the universe; it is to enter into the minds of the thinkers who formulated them. It is to know the spirit of the ages that produced them, the character and disposition of the Greek, the German, the French, the English, and other nations and peoples. Such studies influence for good the ignorant and opinionated mind, and give it a largeness and humanity that is one of the greatest goods of life.

An increasing number of men and women in modern society are reaching this reflective period and are experiencing what might be called the philosophic need. Constant pre-occupation with detail, even when attended by material success, does not satisfy them; so they are reaching out for they know not what. They have a vague sense that as human beings it is their privilege to live in the light of the whole. They wish to rise above the ordinary provincialism and to see life more in its true proportions. This they instinctively feel is necessary to stability and poise of mind. To study philosophy

means to ascend to the summits of thought; it is to look down the long vistas of evolution, to see the tendencies which have brought us to the present and are bearing us on to the future. It is to "be no more children, tossed to and fro, and carried about with every doctrine." It is to cease to be lost and bewildered in the detail of life; it is to get one's bearings in the world and to see the present in its setting in history.

Those who are trying the experiment of living without philosophy may object that they feel no such needs, and that this is but the statement of a philosopher who naturally magnifies the interest dear to his heart. But the fact is that most civilized men have this need and satisfy it in one way or another. Every great religion contains within it, either explicit or implicit, a philosophy, a characteristic world-view. It is not expressed in the language of the schools. Indeed, it is often hidden by the poetic and religious emotions associated with it, like a trellis covered with vines and flowers. Thus the familiar Hebrew-Christian scheme began with the creation of the earth and the cosmos; it gave an account of the creation of plants, animals and men; it included a philosophy of history beginning with our first parents and ending with the last judgment, with the dissolution of the old heavens and earth and the coming of a new.

In the light of modern science, this scheme

has had to be given up. But we must not forget that it performed a real service, that it gave men a cosmic outlook, and some sense of the great frame in which human life is set, and most of all a profound sense that in this vast scheme our lives are significant. It was capable of dramatic presentation and afforded scope for the imagination, for poetry and religious feeling. As conceived and presented by the noblest minds, it also profoundly influenced the moral life. The outcome of the whole was to be a society from which was to be excluded whosoever loveth and maketh a lie, while even now the stars in their courses fight for righteousness and those who stand steadfast in the truth feel that underneath them are the everlasting arms.

This religious philosophy was in part true, but it had its defects, and as a cosmology it is gone beyond the possibility of rehabilitation; yet it was a producer of a consciousness of dignity and strength, and it gave men a sense of significance which many of their children with a greater knowledge of nature and history seem to have lost, and which they are seeking to regain. This generation is to be pitied indeed, if no noble and elevating world-view takes the place of the old. It is vain to suppose that we can live nobly or happily without great thoughts. We may renounce our intellectual

birthright only at the peril of all that we hold dear. Those religious leaders who disparage theology and assume that religious feeling is unaffected by the intellectual outlook, are making a mistake which is more and more apparent. To preach a religion without any thought in it is to promote the growth of irrational mysticisms, such as have been productive of incalculable injury to our race.

There is no adequate substitute for the clear, comprehensive, thorough-going thinking which is philosophy, just as nothing can take the place of science, or art or religion. It is useless to try to compound for the absence of any of the great vital interests by excessive stress on one of the others. Social service, for example, is a very noble and useful form of activity, but if it is to be efficient it cannot dispense with social philosophy. It demands some knowledge of the past of our institutions, of experiments that have already been tried, and of the relation of the different philanthropies and charities to one another. It must be at once palliative of present evils, and more and more preventive of future evils. Narrowness and contraction of view are fatal to social effort. Nor can such activities be most fruitful without the religious spirit. It is a real advantage to be conscious that one's beneficent activities are not carried on in opposition to the great tendencies

of the living world, but rather in accord with them. For this means to realize that one is doing nothing arbitrary, but is an instrument of the good spirit which is gradually becoming dominant in the hearts of men. This, I think, is what Emerson meant, when he said that our hands must be in the world of action, but our heads above the storm.

Above all, religion cannot dispense with the service of the intellect. Great thought and noble feeling go together. Although, as all philosophers of religion to-day well understand, faith, hope and love well up spontaneously from the depths of life and are not created by argument, it is nevertheless also true that religious emotion is profoundly influenced by the conceptions which the mind forms of the world. Materialistic philosophies, for example, seem to negate our inspirations and longings, while an inspiring world-view, a conception of the universe as congenial to our ideals, one that can be held in the face of all difficulties, is a great desideratum. Religion might even be defined as the sense of being at home in the universe, the conviction that a life directed by the noblest ideals is precisely what the situation demands. Philosophy is therefore not the enemy of a pure and noble religion, but its indispensable ally and friend.

It is of vital importance that the churches

shall realize this. If they are to retain the intelligence of our time, they must encourage the men who are capable of constructive thinking. The temper to be avoided is well indicated in the following story told by Prof. Fenn:

A little girl was playing about the room; and her father heard her say, "That square is blue." Dr. Johnson says, "If your child says he looked out of this window when he looked out of that, flog him." It did not seem to be a case requiring such harsh measures; and the father said, "No, that is red." The little child thought a moment, and said, "That red square is blue." Dr. Johnson's dictum seemed to be coming dangerously near the application; and the father said sternly: "What do you mean by that? A thing cannot be both red and blue." The child pondered a moment, and then threw herself at her father, and said, "O father, how I love you!"

That is a parable of a great deal of our religious thinking. We say, "That square is red." "No," somebody says, "that square is blue." And then, forthwith, we "rise to our larger unity" and our great, high statements, and include a self-contradiction, and then say, "Well, love is the greatest thing in the world."

Whether the present neglect of constructive religious thinking is due to conscious incapacity for it or is the result of a reaction from creeds

and dogmas, it can in any event only be temporary. Amid all the uncertainties of the groping present two things ought to be self-evident: the men of the future will continue to be religious, and they will experience an ever deeper need of understanding their faith and of adjusting it to their conception of the world and of history. It is strange that any intelligent man could suppose that the religious life of men which has been growing with their growth, which has been gradually purified through the centuries, should suddenly come to an end in this generation; and it is not less strange that any thoughtful person should on religious grounds prefer the world-views of our remote ancestors to those revealed by science and philosophy. I think it can be shown, as I shall try to indicate in this book, that we have only to take the truth we know and develop its implications; that we have only to be courageous and sequent in thinking and thorough-going in our application of the theory of evolution, to find that we have a philosophy adequate for our present religious needs.

What I have written might be entitled "Apropos of Bergson's Philosophy." I have not sought to give either a complete exposition or criticism of his work. To do that, it would be necessary to employ a technical apparatus and mode of expression that would defeat my pur-

pose. That is, I would have to write just such a book as Mr. J. McKellar Stewart's "Critical Exposition of Bergson's Philosophy," or Mr. A. D. Lindsay's lectures on Bergson, and there is no need to duplicate those works. I have rather sought to set forth some of the larger questions on which Bergson's philosophy sheds light. It is quite clear that he can help us over some difficult places, that he has removed some stumbling blocks that have been in our way. The point, therefore, for all to whom the great questions of science, philosophy and religion are in the last analysis questions of life and living, is not where has Bergson failed, where is he unintelligible or where does his logic break down, but how can he help us, what suggestions of value has he contributed to the solution of our perplexities. The logician's business is to be keen and remorseless, though he should never be capacious or ungenerous. We are thankful for his necessary services, for it is important not to mistake error for truth. Nevertheless, the method of approach here is different. I have studied this sincere and brilliant thinker in the hope of help. I have tried to keep in mind that he offers us not a system, a complete philosophy, but a method with some illustrations of the way in which it is to be used. It is legitimate, therefore, to try this method in cases which have resisted our utmost efforts heretofore, to philoso-

phize in Bergsonian fashion upon problems of supreme importance. Philosophy is a coöperative enterprise; it is the affair of all men; it is, to modify the definition of T. H. Green, the progressive effort of our race at an understanding of life. It therefore grows as does everything that lives. If the reader of Bergson finds that in some cases I have drawn inferences which seem to follow from the philosopher's principles, but which he has refrained from drawing, it must be remembered that Bergson explicitly states that he offers a method which is to be used by others, and that he does not pretend to set forth all the implications of his thought. Forced interpretations must, of course, be avoided. Still, without falling into the company of the unhappy beings who wrest the methods and conceptions of great thinkers to their own destruction, we may safely undertake to point out certain rather obvious consequences not stated by a philosopher and writer so reserved as Bergson. Such reserve is admirable at all times, and in France especially necessary. For that is the land of party antagonisms par excellence. The political and religious animosities are there so intense that he who makes any important statement on living issues is at once claimed as a partisan friend or enemy. Synoptic minds, or minds that appreciate non-partisan views, are at present rare among that

gifted people. All the more wonderful, therefore, is it that the greatest living thinker should be a Frenchman, that in a country torn by the strife of contending parties should arise one who in modern times has most nearly realized Plato's ideal of the philosopher as "the spectator of all time and existence."

CHAPTER II

CREATIVE EVOLUTION IN REAL TIME

The appearance of a new comet in the sky or the flaming up of a new star, due possibly to a collision of vast masses of matter in the depths of space, is an interesting phenomenon, but far less significant for our race than the coming of a great poet, prophet, or thinker. Human existence has, of course, its physical conditions; nevertheless all our higher values and dearest interests are in the realm of thought and love and social life. And because men and women are not purely physical beings, moved solely by physical forces, but in their characteristically human actions are influenced chiefly by ideals which they admire and love, it is literally true, however paradoxical it may sound, that human life rests on ideal foundations. Whatever produces, develops, nourishes, or in any way changes the ideals which are the goals of human striving is of the first importance for our life. The great philosophers of Greece, the prophets of Israel, the poets and thinkers and seers of all ages, are significant because they have produced or given the most perfect expres-

sion to the ideas and ideals that are the bread of our intellectual and spiritual life: they have made us aware of higher motives and nobler standards, and have revealed new visions of beauty and opened up prospects of grander possibilities for the average man.

There is more enthusiasm over the fact of progress than clear understanding of its nature. In what, precisely, does it consist? It is worth while to try to clear away the popular confusion on this subject and make it perfectly plain that the locus of progress is the invisible spiritual tradition of thought and feeling, of sentiments, ideals, and accepted standards, that accumulates and grows purer from age to age. Biologically, in our structure, there is little evidence that we have advanced beyond the men of the Homeric period. But we are born into the mental and moral environment of civilization, we absorb its traditions, its ideas and ideals, and so completely assimilate them that they may be said to become our nature, our very selves. It is therefore evident that the greatest of all benefactors are those who purify and ennoble this body of tradition, this spiritual inheritance which is the matrix of human life. And they do this chiefly by making thought more true and by raising moral standards and developing social feeling. It is the function of the thinker and the prophet to work over that body of

thought and sentiment which is the legacy of each generation from the total past, to reconsider the ideals expressed in literature, law, and social life, to purge away the outworn, the anachronisms, the mistakes, and so transmit to the future an inheritance increased and improved.

A recognition of this truth is of the utmost social importance. We must learn to respect our traditions and also to keep them plastic and growing. Without the inheritance which the centuries have bequeathed to us, we would relapse into the spiritual poverty of savages. The higher life of humanity is one life, an age-long process of development. It is therefore necessary to combat that most injurious of the popular errors about the history of philosophy, the notion that it is the record of futile, constructive efforts, and that each thinker begins by destroying the philosophies that preceded his own. The fact is that this history is the story of the wonderful ascent of thought from primitive savage ideas to sublime and beautiful conceptions of life, and that the process is still going on. Sometimes, indeed, we seem to get into a blind alley, and for a time depressing views prevail; but, later, the mistake is perceived and the ascent begins again. Man's conceptions of the world and of his place therein are continually revised, refined, and enlarged. Recent years, in

particular, have witnessed great triumphs. "Brute matter" is no more, for the atom is now conceived as a structure of wonderful complexity, its constituent electrons being thought of in terms of electricity; that is, of energy. For those who understand the thought situation the old materialism is dead. Belated thinkers in out-of-the-way places may be some time in finding this out, but the instructed no longer think of ultimate reality as consisting of inert, dead particles driven by physical forces.

The world's intellectual and moral advances are to a very great extent made through gifted men, whose insight and power of constructive thinking annex whole territories, which afterward become the possession of the thoughtful section of mankind. Plato and Aristotle, Descartes, Spinoza, Leibnitz, Hume, and Kant are among the greatest lights in the firmament of thought, and the appearance of a new star of the first magnitude is an event of the first importance in the life of our race. It is a great thing to be living at such a time, and I believe that we, in this beginning of the twentieth century, enjoy that privilege. Whether Prof. Henri Bergson of the Collège de France will finally be adjudged worthy of a place in the galaxy named above, I am sure that he is at once one of the most brilliant and profound, as well as one of the most original, suggestive, and

helpful, of the thinkers who are among the glories of our race.

About ten years ago the late Prof. William James asked me if I had read Bergson's writings, and, on my confession of ignorance and request for information, he urged me to read "*Matière et Mémoire*." This proved to be one of the most difficult books I have ever studied, and after repeated readings there are parts of it that I do not understand. And it was only after study of his earlier work, "*Essai sur les données immédiates de la conscience*," translated under the title of "*Time and Free Will*," that I realized the importance of the contribution he has made to human thought.¹

The difficulties we meet in understanding Bergson are not due to any faults of exposition, but rather to the fact that we have to acquire some new categories, since he does not fit into any of the old. He is neither an idealist, realist, pragmatist, nor eclectic. No writer is more lucid, and he would be a bold man who should undertake to make Bergson clearer than he is. Yet so novel and original are

¹ Beginners should first read Bergson's latest book, "*Creative Evolution*," as this contains a summary and restatement of his main positions. The more technical and difficult work, "*Time and Free Will*," should then be mastered, not read in a merely cursory way. After a re-reading of "*Creative Evolution*," one is perhaps prepared to attempt to understand "*Matter and Memory*."

his suggestions, that I know of no philosopher who professes to understand him completely. Prof. James, who was so enthusiastic about him, said: "I have to confess that Bergson's originality is so profuse that many of his ideas baffle me entirely. I doubt whether any one understands him all over, so to speak; and I am sure that he would himself be the first to see that this must be, and to confess that things which he himself has not yet thought out clearly had yet to be mentioned and have a tentative place in his philosophy. Many of us are profusely original, in that no man can understand us — violently peculiar ways of looking at things are no great rarity. The rarity is when great peculiarity of vision is allied with great lucidity and unusual command of all the classic expository apparatus. Bergson's resources in the way of erudition are remarkable and in the way of expression they are simply phenomenal. This is why in France, where *l'art de bien dire* counts for so much and is so sure of appreciation, he has immediately taken so eminent a place in public esteem. Old-fashioned professors, whom his ideas quite fail to satisfy, nevertheless speak of his talents with bated breath, while the youngsters flock to him as to a master. If anything can make hard things easy to follow, it is a style like Bergson's, a straightforward style, an American reviewer lately called

it, failing to see that such straightforwardness means a flexibility of verbal resource that follows the thought without a crease or wrinkle, as elastic silk underclothing follows the movement of one's body. The lucidity of Bergson's way of putting things is what all readers are first struck by. It seduces you and bribes you in advance to become his disciple. It is a miracle, and he is a real magician." ("A Pluralistic Universe," p. 226.)

I have spoken of Bergson as one of the most *helpful* of thinkers, and to justify this statement it is only necessary to consider the relation of his original ideas to the thought situation of our time. Since the spiritual life is, in one of its aspects, an intellectual life, whatever clarifies and advances thought is a help to the spiritual life. Bergson's contributions to philosophy are, therefore, by no means merely an intellectual luxury. As he himself has truly said, they help us to live. Nor has he come too soon. Philosophic and religious thought seemed to be getting into an *impasse*, and the need of some guide to lead men back to the great thoroughfare was urgent. There are many, of course, who do not realize this, for the reason that they are able to hold in an habitual and uncritical way the traditions which they have received. They escape both the happiness and the pain of thought. But there are others, an

increasing number, whose minds have been awakened, in whom has arisen the deathless desire to know, and for whom the joy and the difficulties of the intellectual life have begun. Realizing that their mental childhood is past, they are making a serious effort to frame some true and worthy conception of the meaning of their lives and of their place in the great whole.

Those who in recent times have found themselves no longer satisfied with the venerable theory of a three-story universe, heaven above, hell beneath, and the earth between; with the philosophy of history which started with the fall of man in Eden; and with the somber outlook for our race, a few being saved and the rest going to perdition when the earth and its contents perish in the last catastrophe,—those who have outgrown these ideas and have been under the consequent necessity of trying to work out some theory of life that would content the mind and heart have discovered, on looking around for something better, only two general world-views, both of which are profoundly unsatisfactory.

On the one hand, there is materialism, which conceives of reality as consisting of a vast number of material atoms, impelled by physical forces and moving in accord with mechanical laws. In this view all our human interests, our higher values, are mere by-products, epiphe-

nomena, with no more real significance than the iridescence of mother-of-pearl or the colors of the rainbow. However satisfying to the intellectual part of us, this general view is profoundly depressing, and all that is best within us revolts against it and what it seems to imply. It not only does not legitimate but actually ignores the aspirations, the hopes, the faith, and the love, which give conscious life its value.

The competing philosophy, which has appeared to be the only alternative, is called by a noble name, "idealism." It seems at first to promise much, to justify faith in God, freedom, and immortality, and to make central the things we care most for; but we soon find that it has little power to help, partly for the reason that it is almost unintelligible to all but trained philosophers, and, secondly, because it starts from assumptions that to the unsophisticated intelligence seem nonsense. The idealism we know most of is called post-Kantian; *i. e.*, it is based on certain conceptions of Kant. One of these fundamental notions is that not only do the color, sound, smell, and taste of objects depend upon the peculiar structure of our sense organs, but that time and space also are subjective; that is, they are not properties or relations which belong to things in themselves, but are modes of perception, forms of intuition. This means that reality is not in time and space. As the snow-

ball bears the impress of the hand that forms it, so things appear to be in time and space, for these are our constitutional modes of perception, the spectacles, as it were, through which we see reality.

Although our common sense whispers that this is nonsense, it is possible to juggle with our minds until we actually think we comprehend and accept such ideas. The motive for such self-sophistication is easy to comprehend. We have spiritual needs that are urgent, and this philosophy is apparently our only resource. We have moved out of the structure which was the home of thought in our childhood, and it is uncomfortable being houseless in the open. Materialism being profoundly unsatisfactory, we naturally cling to what seems to be the only alternative, especially as it speaks a noble language and makes fair promises.

Eventually, however, we are disillusioned. It is not possible to rest in a world-view which seems only partially intelligible even when we are reading the philosophic books in which it is set forth, but which we cannot bring into relation with common sense and science. To reach our spiritual refuge it ought not to be necessary to be an intellectual acrobat, able to walk a tight rope over an intellectual abyss. What we need above all things is an interpretation of life that shall be an expansion, a development,

a purification and transfiguration of the views which, as men and women in a real world, we are compelled to hold in order to live at all. There are some things we know in our immediate experience with a native certainty beyond that which any logical demonstration can produce. One of these is the reality of our temporal experience, and our sense that something is being achieved, wrought out, accomplished in time. We believe in a real evolution in real time.

But for the idealism of which we speak, evolution is as unreal as the time in which it takes place. The Absolute is already at the goal. In fact, it is timeless, and the process of evolution is, therefore, strictly speaking, unmeaning: it is an illusion, for nothing really evolves. We cannot consistently be evolutionists and absolute idealists at the same time, and the attempt to be both evolutionists in science and social reform and idealists in philosophy and religion can only result in making philosophy and religion seem unreal. Now as to evolution, we practically have no choice. There is no fruitful work done in science and there are no wise efforts in education or the improvement of social life which are not made along evolutionary lines. And no philosophy which, by making reality timeless, takes away all significance from our thought, our aspiration, and our effort, can

ever win general acceptance. Men must, and will, look elsewhere for the wide views, the deep insights, the stability and serenity, peace and joy, which a working theory of life ought to give.

Absolute idealism, then, though it offers itself as a support for the higher values, starts from assumptions which we cannot grant, is practically unintelligible to the unsophisticated mind, and is inconsistent with the conception of real evolution in real time which is absolutely essential to effective thinking and effective living. In this last respect Kantian idealism is like the prevailing mechanical view of nature, which is also incompatible with the notion of evolution. For, according to the mathematical, mechanical conception of nature, reality is a fixed quantity. All is given. This all, being matter and motion, nothing more is possible than a change in the configuration of the physical system, than a redistribution of matter and motion. Or, if we prefer to speak in terms of energy, nothing is changed by the form of statement. In such a universe evolution is impossible. Nothing is possible except ceaseless rearrangements of the given. Real creation, the appearance of novelties, and human freedom are phrases without meaning. And, since human beings are parts of the given whole, since what is real in them is their physical structure, the

system of atoms composing their bodies, since all future configurations of the universe of atoms are theoretically calculable by mathematics, our sense that our life is an achievement, that we are really doing something, is a delusion, and our aspirations and efforts lose their significance. If this inconsistency of a mechanical philosophy, not only with moral and social life, but also with the doctrine of evolution, is not ordinarily perceived, it is because the average man has small talent for ultimate logical consequences and seldom thinks things through.

To whom, then, shall we go? It is impossible to return to the thoughts of the world's childhood; the two views of life and the world which science and philosophy have offered are logically, practically, and morally inadequate; and, finally, some working theory of life is indispensable to the thoughtful section of mankind. In this situation it is quite clear that the real solution is neither to go backward nor to do violence to our logical and moral sense by an arbitrary acceptance of absolute idealism or mechanism, but to *develop the naturalism of ordinary thinking and make it thorough-going*. Since man is a part of nature, any satisfactory or logically tenable theory of that nature must include man, with his science, his philosophy, his prayers and aspiration, his indisputable goodness as well as the physical side of his life. An

evolutionary philosophy which in its formation takes account only of the physical aspects of nature, but which in its application is extended and made to include life and mind, is a logical monstrosity. The only nature we know is the nature which in its early stages and lower ranges appears to be purely physical, but which indisputably produces and sustains civilization, which blooms into thought and love, moral aspiration, purpose, and effort. These are as truly parts of the great process as the more primitive and apparently purely physical stages. The only rational way to interpret any process is by its outcome, and, if the world process be interpreted in this way, the values which the universe evolves will be seen to give to the preliminary phases all the meaning they possess. Human life will then be seen in true perspective, and we shall have a philosophy that will not ignore or pronounce unreal the aspects of life, the fruits of evolution, which we care most for, but that will instead legitimate them and set them forth in their true significance.

In a radical, thorough-going evolutionism lies our hope of an adequate philosophy, of a world-view which shall satisfy the logical sense and spiritual need of our time. Tentative efforts at such a construction are being made by the clearest and most sequent thinkers, and the thought prospect is brighter than for many

years. This being the situation, it is easy to see why Bergson has met with such a welcome. He is not only a tremendous reinforcement in constructive thought, he is one of the greatest of leaders. He has helped us past the fundamental mistake of Kant, which has been so long a great stumbling-block in our intellectual pathway. What Kant called the ideality, but in ordinary language would be called the unreality, of time, many of us have never accepted, but to dispute the authority of the great German philosopher has until recently been to lose credit. It is therefore not without lively emotion that we read the masterly essay on "Time and Free Will," which disposes of all the specious arguments which have been made against the reality of our temporal experience. We will no longer be tempted to deny what we are most certain of, and we can connect philosophy once more with our real life. In his theory of knowledge, Bergson has also shown that mechanism applies only to certain aspects of reality and not to the whole; and on this side, too, he has set thought free. To read the great pages of "Creative Evolution" is to see proved, in the technical fashion of philosophy, what we knew in our heart of hearts all the time; namely, that mechanism and determinism as a metaphysic could not be true, that the time process is real, that evolution is more than a rearrangement of the given, that

it means achievement, and that life in its higher development is free, that it is, in fact, a great spiritual adventure. The end no man can know, for the reason that our ideals advance as we strive toward them, and we pursue a fleeing goal. New prospects are thus opened up before thought, and our spiritual horizon is indefinitely enlarged.

CHAPTER III

THE CONCEPTION OF THE LIFE FORCE

The thoughts of living men are but the thoughts of their ancestors revised, expanded, corrected. The conceptions of the present generation cannot be understood without taking their lineage into account. The mixed and inconsistent nature of some of our more important ideas is in part explained by the fact that we are trying to combine our intellectual inheritance from two very different civilizations. Our answer to the question, What is reality? is influenced by the stream of Hebrew and Christian tradition and by old Greek thinking. The Bible begins with an account of the creation of the world; in fact, with two accounts, that of Genesis i. being several centuries later in date and in stage of development than that of Genesis ii. and iii. The conception of the author of Genesis i. is that the materials of heaven and earth were present in chaotic form and in darkness, and that the Spirit of God was brooding upon the face of the waters.

Early Greek thought reached an analogous

view. Anaxagoras said that originally there was chaos, and then came mind and brought order. In the *Timæus* of Plato, creation is conceived of as the introduction of order into the primitive disorder. Greek speculation, however, soon arrived at the view that the world is ultimately composed of atoms which, by their mutual attractions and repulsions and consequent groupings, constituted all things. In modern times some thinkers have become frankly agnostic on the subject of the ultimate nature of reality. Herbert Spencer says that the most certain of all things is that we are always in the presence of an infinite and eternal energy whence all things proceed, but he calls this reality the Unknowable. It is true that he professes to know a good deal about it; *e. g.*, that it is one, infinite and eternal; it is the All-Being; it is higher than personality rather than lower; and in referring to it we are nearer the truth in using spiritualistic terms than when we speak the language of the materialist. And, finally, he says that we are compelled to think of the universe as alive, if not in the restricted sense, at least in the general sense. The ultimate reality manifests itself in matter and mind, and these manifestations we know; but what it is in itself he thinks we can never know. It reveals itself in the universe we call material, and it wells up within us in the form of consciousness: we know

these expressions of reality, but nothing more.

Kant, too, said that we know only phenomena, appearances. We see the world as colored, because our eyes react in that way to the light stimulus. We hear sounds, because the air waves excite in our ears movements which we feel as sound. So we experience reality under the forms of time and space because it is our nature to, and we think of the world in scientific terms because we are made that way. We cannot get behind phenomena. What is beyond, it is vain to seek to know. All that we can know is the way reality affects us. Were we differently constituted, all would appear different.

About a hundred years ago a young German scholar brought forward a new and very brilliant suggestion. He said, it is possible to get behind the scenes if we pursue the right method. For I am not only a knower: I am also of the very substance and stuff of the world, of what is known. It is what I am, and I am what it is. To know the nature of reality I have only to look within myself and discover what is fundamental there. This observation is entirely correct, and the method indicated is most fruitful. But Schopenhauer failed in its application. He looked within, and he saw what many others had failed to see, but his vision was distorted by his unhappy emotional state. Many philosophers

have considered that man is essentially a thinking being, and have concluded that the fundamental characteristic of human nature is thought. Hegel took this view, and Spinoza and Leibnitz, and, though the statement is not absolutely accurate, we may include Plato and Aristotle. But, according to Schopenhauer's profounder insight, the essence of our nature is will, and, since our nature is one with universal nature, the ultimate reality is Will.

This was a great step forward in the history of human thought, and, if it had been made by a man of happy disposition and sunny nature, the course of thought in the last hundred years might have been quite different. For in that case this world will would have been conceived of as good will, whereas Schopenhauer believed it to be blind and wicked. It is easy to see why he thought so, why his view was, in fact, inevitable. The world was, he considered, identical in essence with his own nature, and his own nature was discordant and wretched. This philosopher was, indeed, very badly born. In his make-up were two radically different and warring parts. He had a magnificent thinking apparatus and a morbid emotional nature. Paulsen, following G. Voight, gives us the following striking picture of this original and unhappy genius:—

“ Schopenhauer is a very transparent charac-

ter; the dualism of human nature in which reason and desire form the two opposite poles becomes unusually, nay, alarmingly discordant, in him. In so far as he is will, he lives an unhappy life. From his father he inherited a melancholy temperament; he invariably sees things in the wrong light: little things, too, annoy him too much. He is full of violent desires, impetuous, high-tempered, ambitious, sensuous, and withal very diffident. He is constantly plagued by all kinds of vague fears of trouble, losses, diseases, which his sensuous ego might suffer: he is extremely suspicious of all men without exception,—in truth, a series of qualities, any one of which would have been sufficient to make his life unhappy.

“That is one side of his life. And now look at the other. He is also an intellect, nay, a genius, endowed with a remarkable power of objective intuition. He has experienced the blessedness of the life of pure knowledge as purely and as deeply as any thinker before him, nay, perhaps more deeply than any other man, on account of the contrast between the intellectual side of his being and his restless, unhappy, volitional life. . . . There were times when Schopenhauer enjoyed happy hours, pursuing his thoughts, freed from all desires and cares, without hurry and worry, without fear and hatred. But then came other times: the beasts

which seemed to have been entirely tamed rose up again, destroyed his peace, and filled his life with trouble and anxiety. And he was helpless against them, he often says so himself. It is a curious but undoubted fact that the clearest knowledge of the perverseness of the will can produce no change in it. This enables us to understand his ethical system: it is the confession of his failings and sins, it is the yearning of his better self for deliverance from the companion to whom it finds itself yoked." ("Ethics," 211. Thilly's translation.)

Such was the man who made one of the most important suggestions in the history of thought, who first saw clearly that the deepest in man's life is his will, his needs, longings and ideal strivings, and that the heart of human nature is one with cosmic nature. There is truth in this philosophy, but it is colored by the medium through which it came. Schopenhauer, constituted as he was, could not but give a pessimistic cast to any world-view he might hold, and in his case the evil was exaggerated by the influence of Buddhism upon his mind. It is interesting to consider what the effect would have been if Schopenhauer had been a once-born soul, with the elements in his nature more nearly in accord from the beginning, if he had inherited a harmonious constitution like that of Edward Everett Hale or Emerson. It seems certain that he

would then have announced an optimistic philosophy, one which would have amounted to a gospel. He would have said that the heart of the world is good will. That will is the best name for the reality, he saw clearly. His abnormal emotional state led him to think this world will blind and wicked. If it had not been for this unfortunate accident of heredity, if he had been a happily constituted, wholesome nature, he would have given the world, not a pessimistic philosophy, but a religion. For the message of religion, purified and freed from the local and accidental, is that the heart of the universe is good, that is, good will. With every great religion goes a world-view, a philosophy of some kind. It matters not how much the feeling element is emphasized and the thought aspect disparaged or ignored, these two parts of life are really inseparable. Religious feeling and action will always be found to involve a theory of things. Thus Buddhism, in its original form, started with the assumption, which seemed to its followers an axiom, that life is suffering and happiness a futile and foolish dream. Gautama therefore devised a way of escape from the series of rebirths. There were ethical conditions to deliverance, and sympathy and compassion have been fruits of this view of life. But it is a despairing view nevertheless, a pessimistic philosophy. Christianity, on the other

hand, at least in its highest forms, involves an optimistic view of reality. We are not accustomed to think of it as a philosophy, because it is so much more. Yet, like all other great religions, it has a fairly definite outlook upon the world. If we disregard the lower strata of the New Testament and of the Christian creeds, and consider only the heights reached by the founder and greatest leaders of this religion in their supreme moments of insight, we find them declaring in no uncertain tones that "God is love," that we are the children of the perfect, and that evil is to be overcome, not by evil, but by good. This view has been set forth by Robert Browning; it is, in fact, his one great theme. "For all the universe seemed to him love-woven, all life is but the treading of the love-way, and no wanderer can finally lose it." He sought

"To trace love's faint beginnings in mankind,
To know even hate is but a mask of love's,
To see a good in evil, and a hope
In ill-success."

We are so accustomed to consider Hebrew and Christian thought as apart from the stream of the world's intellectual life that we hardly realize that this is a philosophy, a theory of the nature of reality, a magnificent world-view, a product of the deepest insight and greatest speculative daring. And because we have from

childhood been familiar with such an inspiring outlook upon life, we do not easily or fully appreciate the achievements of constructive thought as it climbs slowly in the same direction.

The French thinker, Bergson, evidently does not come up to the world's great problems by way of religion, but through philosophy. He is in the line of succession that dates from Socrates and his great predecessors, and comes down through Plato, Aristotle, Descartes, Spinoza, Leibnitz, Locke, Berkeley, Hume, Kant, Fichte, Hegel, Schelling and Schopenhauer. And the fact that many of us in our earliest years became familiar with conceptions which seem to be the goal of the world's thought, which the religious insight of gifted men attained, so to speak, at a bound, but which could be constructively reached only by the intellectual toil of a long line of great thinkers, ought not to make us impatient with the tentative results and reserved statements of the latest of these workers on the structure of the world's thought.

Bergson is not only a thinker: he is also a seer. Like Schopenhauer, he gazes intently at reality, but describes what he sees in terms of life. His vision is that of a great life flowing through time. This life current is the fundamental reality, the material universe being the ebb of this great flow. Matter is a flux and not a thing, a process derived from the spiritual

process of life by inversion. It is, so to speak, life that has lost, or is losing, its vitality, it is existence almost devoid of duration and descending in the direction of space. These conceptions are new and difficult, but the important thing is that reality is conceived of in terms of life while matter is regarded as a derived product. This is one of the most interesting of all the attempts to bridge the chasm between the living and the non-living. Bergson states his thought in many ways. Life, he says, is tendency, a tremendous internal push, which may relax its tension and so descend to materiality. "The real can pass from tension to extension and from freedom to mechanical necessity by way of inversion. Life is an effort to remount the incline that matter descends." Life is creation, the material is reality unmaking itself. Or, put in another way, "From an immense reservoir of life, jets must be gushing out unceasingly, of which each, falling back, is a world." Again, "We catch a glimpse of a simple process, an action which is making itself across an action of the same kind which is unmaking itself, like the fiery path torn by the last rocket of a fire-works display through the black cinders of the spent rockets that are falling dead."

Any effort at general and brief restatement of Bergson's novel views must be in some

measure unjust. He must be read and re-read to be comprehended. For instance, a careless critic might infer from what is said above that the French philosopher has simply relapsed into vitalism. But that is very far from the case. He considers the question, and himself shows why the vitalistic theories are untenable. It is easy to misunderstand him, for he cannot state his position without using terms which others have applied in a different way. But when he speaks of the life impulse or force, he is thinking of a single immense wave which flows over and organizes matter. The latter being somewhat refractory, the great movement is "sometimes turned aside, sometimes divided, always opposed; and the evolution of the organized world is the unrolling of this conflict." But the philosopher warns us not to attach too much importance to or overwork any of his similes. He speaks of life as an impetus, because no image borrowed from the physical can give a better idea of it. But "in reality," he says, "life is of the psychological order." "Consciousness or supra-consciousness is at the origin of life; it is the name for the rocket whose extinguished fragments fall back as matter; consciousness, again, is the name for that which subsists of the rocket itself passing through the fragments and lighting them up into organisms. But this consciousness, which is a *need of crea-*

tion, is made manifest only where creation is possible. It lies dormant where life is condemned to automatism: it awakens as soon as the possibility of a choice is restored."

Such views are novel and may at first seem fantastic, but we should not be too quick to reject them.

It has been a long time since a constructive thinker of the first order has appeared in the world, and if, as some believe, we have now to do with a man of this rank, the value and extent of his service to us will depend upon our own attitude. Certainly, a minute, unsympathetic, captious criticism that makes the most of minor errors, and that is given to wholesale condemnation of whatever can be shown to have any defect, is unprofitable. Equally mistaken is the attitude of hasty and uncritical acceptance of what has been only superficially examined and imperfectly comprehended. What is called for is, first, an honest, sustained effort to understand, to appreciate the suggested ideas in the large, and to give the constructive thinker a generous reception. We may even be able to help him detect minor mistakes and clear away obscurities. Surely, we ought to do this, especially when we consider that the larger truth and nobler conceptions he attains to are won for humanity and for all time. While the theory of the cosmical life must, like

all others, be subjected to critical examination, our criticism should be large-minded and fair.

According to Bergson, then, evolution is the great drama of the life force unfolding through the ages: it is the story of its adventures, its vicissitudes, its successes and its failures. The failures are as evident as the successes. For evolution is not synonymous with progress. It is sometimes in the direction of our ideals and sometimes away from them. It is radial rather than linear. The molluscs, the fishes, the reptiles, are not on their way to become men. They diverged from the trunk of the tree of life ages ago, and can never return. What is peculiar in the Bergsonian view of evolution is the conception that the unity of life is the unity of the original impulse, that this, as a matter of fact, contained within it many tendencies which are differentiated in the course of development. This original sheaf of tendencies becomes separated into its constituent elements. Thus, in the line of growth through vertebrates up to man, the life force has developed some of its capacities, quite other tendencies being manifested in the ants, bees, and wasps. In the plant world, for the most part unconscious, still other tendencies are expressed. Among the two or three great lines of evolution are many minor paths. There are blind alleys into

which life has run, as in the case of the fungi, and many cases of retrogression.

The most interesting example of the dissociation of the tendencies in the original impetus is that of the vegetative, instinctive, and rational life, which are conceived of, not as three successive degrees or stages of development of one and the same tendency, but as divergent directions of an activity that split up as it grew, the difference being not one of intensity, but of kind. If Bergson is right about this, the view that has prevailed since Aristotle's time is wrong, and there are consequences of great significance for educational theory, religious culture, and practical life.

Deferring till later a discussion of the relations of instinct and reason, it may be pointed out here that Bergson's view of reality as a Great Life is an advance upon the Schopenhauerian conception of the world will. . . . Life is the more inclusive term, to say nothing of the fact that the German philosopher thought the world will blind and wicked only because of the turmoil, strife, and wretchedness of his own inner life. The French philosopher says that the life force is striving in the direction of freedom and love. The meaning of evolution is the effort of life to develop in matter, which is determined, an instrument of indetermination, of freedom; and in the human brain success has been attained.

Automatism is the enemy, and it is our peculiar human privilege, in the moments when we are most conscious, to have conquered, to be really free.

We cannot properly speak of a goal, since there is no end to life's vista. Each of us is rather a progress than a thing. At times we have glimpses of the great movement of which we are part. "We have this sudden illumination before certain forms of maternal love, so striking, and in most animals so touching, observable even in the solicitude of the plant for its seed. This love, in which some have seen the great mystery of life, may possibly deliver us life's secret. It shows us each generation leaning over the generation that shall follow. It allows us a glimpse of the fact that the living being is above all a thoroughfare, and that the essence of life is in the movement by which life is transmitted."

CHAPTER IV

THEORY OF KNOWLEDGE AND THE BERGSONIAN WORLD-VIEW

In the Preface to his "*Voyages en Italie*," Taine gives a short account of the mental instrument which produced the judgments recorded in the book. He did this because he thought his readers would find his impressions more interesting and instructive, if they knew something about the formative influences that helped to shape his mind. So, since philosophy is the reaction of the human mind to the world, to life and its environment, it may well begin with an examination of the mind itself. Every philosophy, therefore, includes or implies, and, in a certain sense, builds upon a theory of knowledge.

Bergson's theory of knowledge is stated with perfect clearness at the very beginning of "*Creative Evolution*." He regards the intellect as a tool which has been produced for practical purposes. In this sense, it is in the same category with tooth and claw. The understanding is "an appendage of the faculty of acting, a

more and more precise and more and more complex and supple adaptation of the consciousness of living beings to the conditions of existence that are made for them. Hence should result this consequence that our intellect, in the narrow sense of the word, is intended to secure the perfect fitting of our body to its environment, to represent the relations of external things among themselves — in short, to think matter. . . . We shall see that the human intellect feels at home among inanimate objects, more especially among solids, where our action finds its fulcrum and our industry its tools; that our concepts have been formed on the model of solids; that our logic is, pre-eminently, the logic of solids; that, consequently, our intellect triumphs in geometry, wherein is revealed the kinship of logical thought with unorganized matter, and where the intellect has only to follow its natural movement, after the lightest possible contact with experience, in order to go from discovery to discovery, sure that experience is following behind it and will justify it invariably."

When, therefore, we are dealing with the world which physical science studies, our intellects are adequate. We can not only know what to do in external situations, but we may attain to some knowledge of the very nature of matter. Bergson is, therefore, no relativist or pragmatist. He says, "If the intellectual form of the

living being has been gradually modeled on the reciprocal actions and reactions of certain bodies and their material environment, how should it not reveal to us something of the very essence of which these bodies are made? Action cannot move in the unreal. A mind born to speculation or to dream, I admit, might remain outside reality, might deform or transform the real, perhaps even create it — as we create the figures of men and animals that our imagination cuts out of the passing cloud. But an intellect bent upon the act to be performed and the reaction to follow, feeling the object so as to get its mobile impression at every instant, is an intellect that touches something of the absolute." And again, "Intellectual knowledge, in so far as it relates to a certain aspect of inert matter, ought to give us a faithful imprint of it, having been stereotyped on this particular object."

That is, so long as we look outward and are dealing with the physical world, the intellect proves to be a very satisfactory instrument. The trouble comes when we turn our gaze inward, and seek to understand our life. The metaphysical incapacity of our thinking apparatus at once becomes evident. Human existence in the past has depended on correct thoughts about things rather than on thoughts about life, and it is therefore entirely natural that the intellect should be able to furnish the former but

not the latter. If the desire of life to understand itself were due to mere perversity or if it were of rare occurrence and could be suppressed, our most perplexing problems would not have arisen. But since this desire does actually appear and become imperious, since life in its progress inevitably reaches a reflective stage, these problems must be bravely met and dealt with, and we must utilize in their solution all the resources at our command.

Now it is a peculiarity of Bergson's view that the intellect, because of its nature and the purpose for which it has been developed, cannot understand life. In its efforts to do so, it applies the thought-forms which fit things but which do not apply to life. It cannot understand anything which is not or cannot be regarded as a machine. Lord Kelvin said he was never sure that he understood anything until he could make a working model of it. In saying this, he was the true spokesman of the intellect. But it so happens that life is not a mechanism, even though certain of its products have mechanistic aspects. What shall we do, then? Is it necessary to give up the problems in which we cannot help being interested? Must we confess that our dearest ambitions lie in one direction and our abilities in another? If there were nothing more in mind than in the powers of conceptual thought, Bergson says that this would be the

case. Happily, there is more in life than the instrumental intellect. The latter, in its development, did not exhaust the resources of consciousness, but is a sort of specialization of something more general and aboriginal. Man as conscious is not all intellect. There remain in him traces of those primitive powers, which, being still unspecialized, retain the function of knowing life itself. These powers are ordinarily called instinct. So far, then, as we are not merely practical men but philosophers, interested in life and reality, we must think with the whole man, or, rather, we must not only think but also use those residual powers, complementary to thought, which can know life because they are life, and which in their rudimentary form we call instinct, but which may be developed and clarified until they become intuition.

Although in this exposition Bergson emphasizes the difference between intellect and intuition until the reader may get the impression that they are opposites and have nothing in common, it is very necessary to avoid such a mistake. They have a common origin, are kindred in nature even if complementary in function, and both are essential to a normal and complete human life.

This tendency to exaggerate distinctions until they appear to be oppositions is a practically inevitable consequence of all successful attempts

at clear exposition. Those who have had much experience in teaching, or in the endeavor to make things clear to others, understand this. In order to effectively present any aspect of truth, it is necessary for the time to ignore other aspects,—to be, as it were, unjust to them. Yet, unless at another time they are recalled and the whole embraced in a synoptic view, the result is a distortion of the truth. The thinker cannot drive all his horses abreast, and he must run the risk that attends the exposition of one truth at a time.

Thought, then, is a process that makes use of concepts, that encloses facts in certain frames.

In our converse with the world, we find these thought-forms to be of practical value, but they are useful for the reason that they were molded on the very objects to which they apply. Now it so happens that we are deeply interested not only in these things and in the sciences arising from their systematic study, such as mathematics, physics, chemistry and engineering, but also in life and in the science of biology. We want to understand the processes of evolution, to see how the present has grown out of the past and how life goes on. And when we seek to do this, we naturally employ the same thinking apparatus that has proved so effective in practical affairs and in physical and mathematical science. And if we ask what are the principal

concepts, the most important thought-frames, with which the intellect is provided, and in which it proposes to enclose the facts of life, we find that they are two, mechanism and finalism, or, as we should say, mechanism and teleology. Now Bergson's contention is that neither of these fits the facts, although he states explicitly, and it is important to remember this, that while neither garment is of such a nature as to properly clothe the reality of life, yet one of the two, finalism, "might be recut and resewn, and in this new form fit less badly than the other." That is to say, though neither theory fits the facts, yet teleology is at least nearer than mechanism to the truth.

In order to understand the profound significance for philosophic and religious thought of the wonderful first chapter of "Creative Evolution," it is necessary to vividly realize and to keep in mind that it has almost universally been considered that we must be either mechanists or teleologists if we are to attempt any comprehensive thinking about life. If we reject the one view, we must of necessity hold to the other, there being no other alternative. Since Kant and especially since Darwin, the teleological way of regarding life and the world has been supposed to be thoroughly discredited, and the mechanistic way is said to be in the possession of the field. Men of science are content to

let the poets sing of their faith that "through the ages one unceasing purpose runs," but that, they say, is mere poetry. Notwithstanding the fact that human life is essentially purposive, and that our life is a part of the world's life, this aspect of reality is generally disregarded in scientific and philosophic thinking, and the most persistent efforts are made to explain reality as a *system*, that is, as a *mechanism*. Those who have been trying to fit this theory to the facts, and practically all who are deeply interested in the larger problems of life have made many such attempts, have met with numerous facts which seem entirely inconsistent with such a view; but we have continued for the reason that we supposed all finalistic explanation to be impossible, and that therefore an explanation on the alternative mechanistic theory must be possible.

But Bergson has given an absolutely thorough-going and final refutation of the mechanistic view of life. Whatever defects the critics may finally convict him of, he has certainly made both the current mechanistic and the old-fashioned teleological view of reality impossible to all who understand his argument. The thought situation is, therefore, radically changed. At first, the change may not seem to be for the better. For, if we must think of reality in one of the two ways, and neither is a right way, are we not landed in agnosticism? No, replies the

philosopher. It is really the fact that we cannot think, or intellectually conceive, the reality of the life process; but we can live it and be aware of it as we live it. We can penetrate to its depths by insight. In order to realize this, he says, it is only necessary to contrast our psychic life as we immediately experience it with our thoughts about it. We think of it as composed of a succession of states, sensations, ideas, volitions, etc. But it really is nothing of the kind. It is a flux, a continuum. Each of the so-called states when examined proves to be itself a flow, a change. The "states" we think of are purely conceptual; they are instantaneous sections, or snapshots, of what is all movement. So, we think of time as a succession of instants, but the time we live through is a steady flow, a continuous movement which swells as it advances. In time, as we think it or intellectually conceive it, the instants replace one another; in real duration, the past lives in the present and never really ceases to be. Life is like a snowball which grows larger as it is pushed along. The process is irreversible; it is always being added to, and the addition produces a situation which has never been before and can never be again. It is creative. Novelties actually do appear. Bergson does not speak of it, but one cannot help thinking how true a description of evolution this is. From the time when our planet was red hot

till the present when it is peopled with millions of species, both of plants and animals, and when civilization is advancing with great rapidity, the creation of the new has been the characteristic feature of the whole process.

The way in which Bergson does connect the life process we know in ourselves with the world process is most interesting. Having established the fact that our life does not consist in a succession of instants, but that we really endure, mature, are creating ourselves or are processes of creation, he considers a simple physical process such as the dissolving of a lump of sugar in a glass of water. If I want to drink it, I have to wait; and the external process for whose completion I have to wait coincides with the time I live through. If, now, the fact of this coincidence of the physical process with the vital process, with the duration I live through in waiting for its completion be well considered, it will be found to mean that physical processes are not merely in the abstract time of thought, but that they endure and "the universe of which they are part endures."¹ That is to say, the universe is like my life which I experience and know directly, through an insight which is life's awareness of itself, to be a creative process; and

¹ Or, as Mr. J. M. Stewart puts it, "Spirit is identical with duration, and matter has duration, consequently matter itself differs from spirit only in degree."

this means that the universe is a life, an ongoing process of creation.

But if it is through insight rather than through conceptual thought that we know the reality of life, how, it will be asked, can we explain the success of science and of the marvelous enterprises of this engineering age? Bergson's answer is that science, like common sense, deals with detached objects and isolated systems, and it succeeds because "matter actually has a tendency to create isolable systems that can be treated geometrically." Furthermore, notwithstanding his conviction that reality is a creative life that endures through time, Bergson admits that we are not without justification in regarding matter as non-living. "Matter," he says, "was life originally. That is, the cosmical élan which is life, consciousness or supra-conscious reality, is a current that ceaselessly flows. When it turns backward, when for some unexplained reason the direction of the flow is reversed, the result is that flux we call matter. Life is a reality which is making itself, matter is the same reality in the process of unmaking. Matter is real, but it is derivative and perishing. Such a metaphysics might be called either vitalism or monistic spiritualism. Matter and life or spirit are one in origin but different in degree." The fountain of things, then, is the life impulse which is essentially a need of crea-

tion and which strives in the direction of freedom. It is "confronted with matter, that is to say, with the movement which is the inverse of its own and which is necessity itself. But it seizes on this matter and strives to introduce into it the largest possible amount of indetermination and liberty." The result is the evolutionary process and the organic world.

Some readers will feel inclined to stop at this point. Such speculations will seem to them too fanciful and too precarious to deserve serious consideration. Yet it will pay to continue and to persist in the effort to understand these new suggestions. For they are new, they are not entirely baseless, their author is a man of genius, of vision and insight, and there is a chance that we may really learn something. Then, too, we are tired of threshing the old straw. Let us go on. The philosopher takes the utmost pains to make his meaning clear. Here is one of his illustrations: "Let us imagine a vessel full of steam at a high pressure, and here and there in its sides a crack through which the steam is escaping in a jet. The steam thrown into the air is nearly all condensed into little drops which fall back, and this condensation and this fall represent simply the loss of something, an interruption, a deficit. But a small part of the jet of steam subsists, uncondensed, for some seconds; it is making an effort to raise the drops which

are falling; it succeeds at most in retarding their fall. So, from an immense reservoir of life, jets must be gushing out unceasingly, of which each, falling back, is a world. The evolution of living species within this world represents what subsists of the primitive direction of the original jet, and of an impulsion which continues itself in a direction the inverse of materiality."

Such illustrations are ingenious, but we must be careful not to take them too literally. We are so accustomed to think of matter as a collection of separate objects rather than the flux, the universal interaction which it really is, and to think of life as consisting of numbers of organic beings, that it is somewhat difficult to keep in mind that life is a current that flows through time and through all the beings it organizes, and that the physical universe is a continuum, a vast complex of movement. In this world-view, activity is the primal source. *In the beginning was life.* We are told that we may "speak of a center from which worlds shoot out like a rocket in a fire-works display — provided, however, that we do not present this center as a thing, but as a continuity of shooting out. God thus defined, has nothing of the ready made; He is unceasing life, action, freedom." The Father worketh hitherto.

The great enterprise has been only par-

tially successful. Life is essentially freedom, free creative activity, but even in man it has found only incomplete expression, since he is ever threatened by the automatism which has overtaken all other living creatures. Matter has proved very refractory to the age-long effort to make it the instrument of freedom. "From our point of view, life appears in its entirety as an immense wave which, starting from a center, spreads outwards, and which on almost the whole of its circumference is stopped and converted into oscillation; at one single point the obstacle has been forced, the impulsion has passed freely. It is this freedom that the human form registers. Everywhere consciousness has had to come to a stand; in man alone it has kept on its way. Man, then, continues the vital movement indefinitely, although he does not draw along with him all that life carries in itself."

Man is the great success in life's adventure, but even this success is partial and incomplete. It has proved impossible for all the tendencies in the cosmical élan to find expression in one organic being. Life is a sheaf of tendencies which split and become separated in the course of evolution, or, as Mr. Balfour says, it is like an army marching through a country; "if the cavalry take one road, the infantry must take another."

CHAPTER V

INSTINCT, INTELLECT, AND THE IDEALLY COMPLETE MIND

Man has a part of the ideal mental endowment, viz., the intellect which creates pure and applied science and thus makes civilization possible. But ants, bees and wasps have another part, namely, the instinctive powers which are so feebly developed in the human race. "It is as if a vague and formless being, whom we may call, as we will, man or superman, had sought to realize himself, and had succeeded only by abandoning a part of himself on the way. The losses are represented by the rest of the animal world, and even by the vegetable world, at least in what these have that is positive and above the accidents of evolution." We have not received all that life had to offer. The inheritance has been divided. This has, doubtless, in some respects been an advantage. The animals are useful to us in that "consciousness has unloaded on them whatever encumbrances it was dragging along, and so it has been enabled to rise, in man, to heights from which it sees an unlimited horizon open again before it. It is true that it has

not only abandoned cumbersome baggage on the way; it has also had to give up valuable goods. Consciousness, in man, is pre-eminently intellect. It might have been, it ought, so it seems, to have been also intuition. Intuition and intellect represent two opposite directions of the work of consciousness: intuition goes in the very direction of life, intellect goes in the inverse direction, and thus finds itself naturally in accord with the movements of matter. A complete and perfect humanity would be that in which these two forms of conscious activity should attain their full development."

This deprivation, this loss of the instinct or intuition which knows the current of life as the intellect is by nature adapted to know the counter, or material, current, accounts for the fact that biology is less advanced than physics, and for the confusion into which we fall when we try to *think* life, when we seek to apply to life the categories or thought-frames of the intellect which were formed to deal with a reality that flows in the opposite direction.

Our difficulty in understanding evolution is due to the fact that we are one-sided, that we are but fractional expressions of life. "In the humanity of which we are part, intuition is almost completely sacrificed to intellect. It seems that to conquer matter and to reconquer its own self, consciousness has had to exhaust the best part

of its power. This conquest, in the particular conditions in which it has been accomplished, has required that consciousness should adapt itself to the habits of matter and concentrate its attention on them, in fact determine itself more especially as intellect." The situation, though difficult, is not hopeless. The rudiments of the powers we need are still in us and are susceptible of cultivation. According to Bergson, the defect will be overcome when the too purely intellectual and external views of the world, furnished by conceptual thinking, are supplemented by the deliverances of our latent instinctive power, developed until it becomes intuition, insight into life. At present, intuition is vague and discontinuous. "It is a lamp almost extinguished, which only glimmers now and then, for a few moments at most. But it glimmers wherever a vital interest is at stake. On our personality, on our liberty, on the place we occupy in the whole of nature, on our origin and perhaps also on our destiny, it throws a light feeble and vacillating, but which none the less pierces the darkness of the night in which the intellect leaves us."

Whatever we may think of the general world-view here set forth, there is no doubt that in the last sentences the French philosopher has given expression to truths of the utmost importance. The light that shines on life's pathway, that

illumines personality, liberty and our kinship with the ideal, *is intuition*. When we have to deal with these, the mechanizing intellect is as helpless and irrelevant as instinct is when it is a question of describing the processes of the physical world. What philosophy aims at is completeness of life. "These fleeting intuitions, which light up their object only at distant intervals, philosophy ought to seize, first to sustain them, then to expand them and so unite them together. The more it advances in this work, the more it will perceive that intuition is mind itself, and, in a certain sense, life itself; the intellect has been cut out of it by a process resembling that which has generated matter. Thus is revealed the unity of the spiritual life." Immediately after, Bergson makes the profound remark, which experience has often verified, that if we wish to be complete men, if we wish a spiritual life that shall be both intellectual and intuitional, we must first take the point of view of intuition, because it is easy enough to go from intuition to intellect, but if we start with the intellect and try to think our way back to insight into life, we shall find, as men have always found, that we are attempting the impossible. Philosophy is, therefore, in Bergson's view, not a mere idle speculation. It aims to round out human nature, to recover essential powers almost lost, to develop them to fuller

strength, and to unite all our higher activities. And so far as it does this, we can all agree with him that "Philosophy introduces us into the spiritual life."

Something more must be said about Bergson's theory of knowledge. He is not easy to classify. Sometimes he is called a pragmatist because he approaches philosophy by way of biology and because he regards the intellect as an instrument formed for action, rather than for speculation. Yet he is equally sure that we may arrive at absolute knowledge. Science more and more penetrates into the mysteries of the nature of matter, while through intuition we know life from the inside. Our knowledge in both cases is partial, but is valid and real so far as it goes. His view of perception, as set forth in his "Matter and Memory," is not far from that of common sense, and will be more easily understood by the average thoughtful man than by those who have been sophisticated through long familiarity with metaphysical disquisitions. The living body in general and the nervous system in particular are only channels for the transmission of movements; their function is to convert stimuli into reactions. The brain does not produce representations of the rest of the universe, for that would mean that in some sense it contains the material world of which it is itself but a part. To make of the

brain the condition of the image of the totality of things is to contradict ourselves, since the brain is by hypothesis a part of that image. Bergson thus avoids the snare into which many unwary thinkers have fallen. Schopenhauer, for instance, said that the world was his *Vorstellung*; matter was mere idea. And if you ask for his reason, you are told that thought is a function of the brain. The procedure of the author of the "Grammar of Science" is substantially the same. Thus literary men and scientists, who are strong in their own departments but without discipline in philosophy, sometimes repeat the mistakes of the ages. Because of the brilliant and interesting style of the writers and the prestige of the students of nature, both get a hearing and tend to confuse the situation.

Such assumptions and such thinking can only lead to the inconsistent mixture of materialism and idealism which Schopenhauer's philosophy presents. The first chapter of "Matter and Memory" clears many of these difficulties away. Bergson there shows that if we begin with the assumption that the physical world is reality and that conscious perception and thought are only epiphenomena, or by-products of cerebral activity, we thereby make them out to be a mere accident, a mystery. On the contrary, if we start from the idealistic rather than the material-

istic point of view, we become unable to account for the order of nature. We find it necessary to invoke the assistance of some *deus ex machina* or theory of pre-established harmony between matter and spirit. That is, for idealism science is an accident and its success a mystery.

All is simplified if we assume that between things as they are and things as they are consciously perceived, there is a difference, not of nature but of degree. There is more in objects than in perception, for while perception does not produce representations or images, it does select them; it picks out those aspects of reality which interest us in a practical way and with which our action is concerned. We must never think of the brain as a camera, for *the picture is already taken*. Pure perception is something given, it is a part of things rather than of us. (By pure perception Bergson means what would be left of a perception if there were taken away the apperceptive part of it, the element of memory and recognition.) It knows the sensible qualities of matter in itself, from the inside, that is, absolutely. The difference between physical and mental, from this point of view, is a matter of degree, the perception containing, or rather *being*, a part of the complete reality of the object perceived. In matter there is something more, not something different, from what is actually given.

Human action, however, is not a simple reflex response. The light of the past is brought to bear on the present situation; memory is an essential element in every perception; the part of us that lives or endures and grows through time is always present, and this is the subjective phase of the process. The distinction between subject and object, therefore, is not a distinction between inside and outside; it is not in any sense a matter of space, but of time. Bergson summarizes his position thus: "My knowledge of matter is, then, not subjective, as it is for English idealism, nor relative as Kantian idealism would have it. It is not subjective because it is in things rather than in me. It is not relative because the relation of the phenomenon to the thing in itself is not that of the appearance to the reality, but that of the part to the whole."

It has not been easy to think such thoughts since Descartes's time. Some of our most serious metaphysical difficulties date from that miracle of clearness and consistency. The great distinction which he drew, and from the lack of which previous thought had been more or less of a blur, was that between consciousness and extension, the one being the essential characteristic of mind, the other that of matter. But having made this distinction, we have hypostatized it, and have exaggerated a difference into an opposition of nature. *What are only distinguishable*

aspects of reality we have made into antagonistic essences or natures. So, having arbitrarily put asunder what belongs together, we have never since been able to unite the two phases of existence in any satisfactory way. We have dichotomized our universe, and the resulting antinomies have never ceased to distress our minds. The body is conceived of as part of the material universe, which is thought of as a closed system. Energy is ceaselessly being transformed, and the system of the ultimate particles of matter constantly changes its configuration. But since all physical results must have physical causes, our conscious life seems superfluous. It is hard to see how it can be in the interstices of the system, either as a cause or an effect of physical changes. If I go to my dinner, all the movements of my body are physical and have physical causes; it is inconceivable that the conscious idea of a beefsteak should set the machinery in motion. We seem logically driven to materialism or psycho-physical parallelism, views which in turn quickly prove untenable.

For, after all, what we know best is our conscious life, and it is a thing of purpose. It is essentially a striving after ends, and the highest ends we call ideals. That is, it is literally true that life rests on ideal foundations. It is a process of striving for the realization of conceived and desired goods. But, from this point

of view, the disquieting antinomy remains. Having defined matter and mind, purpose and physical process, as entirely different in nature, it has become impossible to understand how either can influence or be influenced by the other. Hegel said that we must remember that differences are not absolute, but fall within a more inclusive unity. That there is truth in this view is hardly open to reasonable doubt, and probably no one would doubt it except for past overstatements of it which have in turn led to caricatures, the result being that it has fallen into discredit.

Bergson's view of perception, his doctrine that the reality perceived is physical or mental according as we consider the whole of the object or merely those parts of it that are of practical concern to us, has a technical name, being known among philosophers as the theory of immanence, or epistemological monism. It is held in a somewhat different form by Mach and Avenarius, and seems to be regarded with increasing favor by modern thinkers. Prof. R. B. Perry makes it the basis of a realistic philosophy of mind and life. It seems to offer a way of escape from the circle in which we have so long been going round and round. Nothing more can be hoped for from any investigation along Kantian and post-Kantian lines. It has long been evident that the problem has been wrongly stated and that something is the matter with our as-

sumptions. We cannot think effectively in terms of phenomenon and thing in itself, of a timeless Absolute, of a subject whose structural activity constitutes the phenomenal world and gives nature its laws; in short, progress must be around Kant rather than through him. In this advance, Bergson is one of the leaders. The reader of "Matter and Memory" ought not, therefore, to be discouraged by the novelty of the view, for this is the direction in which the best thought is now moving. It is also to be remembered that the difficulty in understanding is largely due to fixed habits of thought on the part of the reader, rather than to any lack of expository power on the part of the philosopher. Bergson's ideas cannot be pigeon-holed in the familiar Kantian categories. What is necessary is a new way of thinking, and those who have not mental vitality and plasticity enough to permit of this should take to other pursuits; philosophy is not for them. Moreover, even when we recognize the defects of our habitual thoughts and rise to a higher point of view, we find ourselves continually slipping back. The world-view with which we first become familiar has an influence over our after years altogether out of proportion to its value. We may be forced by advancing knowledge to give it up, but there is always danger of a relapse. Thus, in my college days, I received the impression that

the bright sunrise of civilization took place in the glorious creative centuries of classic Greece. Egypt, Assyria, Babylon,— I knew of them, but they seemed vague and shadowy. Now that recent discoveries have immensely widened our horizon, we are forced to think of Greek culture itself as a sort of renaissance. This is very clear when we are engaged in archæological studies, but I sometimes find that these things have slipped from my mind and that I have fallen back into the view of history acquired in my student days. In such a case, there is no help except in frequent and long consideration of the true situation. And when we have to deal with a philosopher who has a new vision and brings a new method, there is no way of understanding him except through long comradeship with his mind. The casual and cursory reader of Bergson will derive but little profit from his labor. This is true of all philosophers, but it is particularly true of him. For he acknowledges frankly that he himself experiences difficulty in keeping to his point of view. Being a philosopher in this sense goes against the grain. It is easy to follow the natural bent of the intellect and to deal with those aspects of nature which are of practical concern. But insight is different from reasoning and more difficult; to attain it, one must reverse the current of mental life and assume an attitude which it is

not easy to maintain. In his preface to the English translation of "Matter and Memory," Bergson says that "The reader will find his way through the complexity of that work if he keeps a fast hold on the two principles which we have used as a clue throughout our own researches. The first is that in psychological analysis we must never forget the utilitarian character of our mental functions, which are essentially turned toward actions. The second is that the habits formed in action find their way up to the sphere of speculation, where they create fictitious problems, and that metaphysics must begin by dispersing this artificial obscurity." Which is saying with perfect clearness that whatever value pragmatism may have in practical life, it incapacitates us for metaphysics. So far from being a method for the solution of the world's higher problems, it is really the pragmatic way of thinking and habit of mind that has created them.

CHAPTER VI

BERGSON'S PHILOSOPHY AND PHYSICAL SCIENCE

If this outline of Bergson's philosophy seems appreciative rather than critical, it is intentionally so. I wish his constructions to have a chance. It is an old maxim that we must try all things and hold fast to that which is good. If we are not to accept in an uncritical way a mass of conflicting and absurd opinions, every new thought-proposal must be subjected to thorough examination. Still, there are critics and critics, and a very small-minded logician might reject, as inconsistent with his intellectual scheme, great truths that life and reality have abundant room for. The great question is,—What light does Bergson's thought shed on our greatest problems, what can he do for clear, consistent and constructive thinking in physical and biological science, in psychology, philosophy and religion? The following discussion is by no means merely an exposition of his view of the relation of the physical sciences to biology and of both to philosophy, but is rather an at-

tempt to state a situation which he has helped to make clear.

One of the reasons why it is probable that a new era in philosophy will date from Bergson is that he is the first thinker of his class to take into account the data of biology and psychology. It was the misfortune of Descartes and Kant to have lived before these sciences had made much progress. Science for them was mathematics and physics, and it was natural that they should cherish the mathematical ideal of knowledge. But there is much knowledge which is not of the kind these thinkers prized most, and one is hindered in philosophical thinking rather than helped by such an ideal, since it tends to prevent appreciation of the non-mathematical aspects of reality. The fact is that not one of the categories which we successfully use in physical and mathematical investigations applies exactly to the things of life. As Bergson says: "All the molds crack. They are too narrow, above all, too rigid, for what we try to put into them. Our reasoning, so sure of itself among things inert, feels ill at ease on this new ground. It would be difficult to cite a biological discovery due to pure reasoning. And most often, when experience has finally shown how life goes to work to obtain a result, we find its way of working is just that of which we should never have thought." This reminds us of the statement of

a great psychologist that "growth is essentially alogical."

The philosopher who comes to the study of a world which includes life, and who tries to comprehend it through concepts derived from mathematics and mechanics, is like a man who makes an effort to put a five-fingered hand in a three-fingered glove. He assumes to classify without an adequate number of classes. When Europeans first came to America, the natives called their sailing vessels birds, their guns walking-sticks, the white men themselves being classified as goblins or gods. That is, the savages were like an office man without a sufficient number of pigeon-holes in his desk. They, therefore, did what we all do: they sought to classify the new experiences under the old heads. Such classifying, such subsuming, is what we ordinarily mean by knowing. Says Bergson: "Plato was the first to set up the theory that to know the real consists in finding its Idea; that is to say, in forcing it into a pre-existing frame already at our disposal, as if we implicitly possessed universal knowledge. But this belief is natural to the human intellect, always engaged as it is in determining under what former heading it shall catalogue any new object; and it may be said that, in a certain sense, we are all born Platonists."

We can easily see what was the trouble with

the savages: it was their poverty of categories. But how is it that we make absolute judgments about everything without suspecting that we, too, need new concepts? Yet we are most reluctant to acknowledge this defect, even when it is pointed out. "The idea that for a new object we might have to create a new concept, perhaps a new method of thinking, is deeply repugnant to us." This is one of the reasons why many will find Bergson difficult, if not unintelligible. They will approach him with their little ready-made system of thought-frames, and, as he will not fit into them, they will have no place to put the truth that he teaches. Now philosophers have generally come to their problems by way of mathematics and physical science, and have naturally but vainly sought to apply the categories they brought with them to the processes of life. This was perhaps inevitable, since biology has been so late in its development. What is necessary is some new categories, concepts, thought-frames, or, rather, a new way of thinking. For the life process will not fit into any frame. It is to be understood only by sympathy, instinct, intuition.

Philosophy must then abandon the mathematical ideal when it deals with the things of life. It must cultivate the power of insight, of intuition, and to the truth concerning life that comes through vision it must unite the truth concern-

ing the material world derived through perception and conceptual thought. To a philosophy that thus "takes into account the whole of what is given," the future surely belongs.

As this matter has very great practical as well as theoretical importance, I beg the indulgence of the gentle reader while I try to make clear a distinction necessary not only for the understanding of Bergson, but also for effective thinking on the greater problems of life. If we mix things in thinking, we will mix them in action, and it is therefore worth while to make every effort to be clear. Materialism and determinism in philosophy and their blighting effects on the higher human life are in part due to a confusion of thought about the nature of concepts and their relation to the concrete world of perceptual experience. For instance, *mathematical knowledge, which is ideally exact, is not knowledge of nature at all*, and the knowledge of nature and life can never be mathematically precise.

It is easy to justify this statement. Take, *e. g.*, geometry, which deals with points, lines, surfaces, angles, etc. Every real triangle — that is, every triangle that we can feel or see — is only an approximation to a perfect figure. The lines constituting its sides are not perfectly straight, and they have a certain breadth, whether we draw them on paper, the blackboard,

in the sand or make them of wood or metal. With this concrete triangle of our perceptual experience geometry has nothing to do. It deals with an ideal figure, formed in the mind, or by the mind, through our power of carrying to a limit in the imagination qualities which we have perceived. We perceive imperfect, concrete, geometrical figures, but we can *conceive* of perfect ones. Now these perfect triangles, circles, etc., are ideals, abstractions, concepts, and geometry deals exclusively with these. Mathematics is, then, not a knowledge of nature at all. It moves wholly in the region of concepts, abstractions. And the same is true of physics and mechanics, so far as these sciences are mathematical. In the problem of the lever, for instance, in our calculations we substitute for all real levers, such as crow-bars and hoe-handles, a rigid straight line: the fulcrum is conceived of as a point, and the weight to be lifted as an abstract mass. How can any one fail to see that in all such cases *the calculator is dealing with pure ideals*, just as truly as if he were a poet? In the concrete world these concepts are useful so far as they are applicable. To the extent that a crow-bar is like a rigid straight line, what is true of the line will prove true of the crow-bar. So far as the concrete conditions are identical with the ideal, abstract, or conceptual conditions, that far will the cal-

culations work. And they do work sufficiently well to be useful, but all the exactness is in the realm of concepts.

It is the same with necessity. There is no necessity except in the realm of concepts. Given this, then something else logically follows. If life were no more than an interplay of concepts, the determinist might make out his case. But *there is vastly more in anything than in our concept of that thing*, there is more in life than in any man's thought of life. The bankruptcy of thought is always due to failure to remember this fact. The concepts we form are frames for enclosing fact, and, however useful they may be in enabling us to order our experience, *they are only frames*, while experience is infinitely rich.

Mathematics, then, and the physical sciences so far as they are mathematical, are clearly seen to be *a set of consistencies*. *Knowledge of nature is knowledge of the extent to which they apply*. There are aspects of the world process which our formulæ approximately describe. But these formulæ in themselves make no statements as to external or objective existence. The extent to which the concepts of physical science apply is in every case to be determined empirically. Now science is successful because its way of conceiving physical processes enables us in some measure to control them. From our experience with the physical world we arrive at

certain ideas or concepts which we proceed to define, to make precise. We then study the logical relations of these ideas, and having reached certain conclusions we take them back into the region of experience which first suggested them, and it is sometimes our good fortune to find that nature justifies our expectations.

In the enthusiasm of our success, however, it is easy to forget, and we often do forget, that these principles are of limited application. They describe certain aspects of reality only. They *apply to artificial systems which our thought isolates in the concrete whole*. The real whole may well be a life, as Bergson contends, and as Fechner divined long ago. If there is a soul of goodness in things evil, there is often a soul of truth in writings so imaginary and even fantastic as Fechner's "Zend-Avesta." Because we succeed when we conceive of inorganic nature as composed of atoms or electrons moving in accord with laws capable of mathematical statement, it does not follow that there is nothing in organic beings or in the universe as a whole that is not theoretically capable of statement in similar terms. Bergson puts it thus: "The question is whether the natural systems which we call living beings must be assimilated to the artificial systems that science cuts out within inert matter, or whether they must not rather be compared to that natural sys-

tem which is the whole of the universe. That life is a kind of mechanism I cordially agree. But is it the mechanism of parts artificially isolated within the whole of the universe, or is it the mechanism of the real whole? The real whole might well be, we conceive, an indivisible continuity. The systems we cut out within it would, properly speaking, not then be parts at all; they would be *partial views* of the whole. And, with these partial views put end to end, you will not make even a beginning of the reconstruction of the whole, any more than, by multiplying photographs of an object in a thousand different aspects, you will reproduce the object itself. So of life and of the physico-chemical phenomena to which you endeavor to reduce it. Analysis will undoubtedly resolve the process of organic creation into an ever growing number of physico-chemical phenomena, and chemists and physicists will have to do, of course, with nothing but these. But it does not follow that physics and chemistry will ever give us the key to life."

It is important here to guard against misunderstanding. Bergson is not warning the physicists and chemists away from the realm of life, or seeking to limit the scope of their researches in any way. It is *in fact their duty to proceed as they are doing* and to explain on their principles all that is so explicable. How far they

can go can not be settled *a priori*, but must be determined empirically. But the extension of their methods as far as they prove to be of use is one thing; to assert that there is nothing in life not describable in physical and chemical terms is something entirely different. The former is the procedure of the man of science, the latter that of the *a priori* philosopher. When the same man essays to act in both rôles, we may accept him in the one and reject him in the other.

It is a curious fact that men of science who make excursions into philosophy often do not realize how *a priori* they are. They would not think of making assertions about any other subject which they have not studied, but they occasionally act as if training in psychology and philosophy were wholly unnecessary. It is not likely that such mistakes will long continue to be made, since investigators are more and more interested in examining the foundations and presuppositions of their respective sciences. But many readers of popular science have very confused notions about the relations of concepts to things. It is, therefore, of the highest importance to bring about a general understanding of the fact that while the data of mathematics are drawn from experience, they are only suggestions of the abstractions, the ideals, the perfect figures, with which mathematics deals. After the start

has been made, the physical world could cease to exist without detriment to mathematics, which is henceforth a logical procedure. Physical science, also, ignores all but the physical aspects of reality. It does this necessarily. It cannot do its work unless it restricts itself to the field it has chosen, and for the time ignores metaphysics and poetry. This is entirely right. Evil results ensue only when physical science is made into metaphysics, and it is assumed that the aspects of reality which it studies are fundamental, and that, consequently, life and consciousness and purpose are incidental, or epiphenomenal. In such a metaphysics, freedom and purpose are excluded by definition. Bergson claims that we should not make the assumption that the most abstract concepts are fundamental and the chief characteristic of reality, but that we should build on the idea of life, which is the richest and most inclusive of ideas. If we do this, there will be room in our philosophy for all the manifold peculiarities of life, for consciousness, purpose and freedom, and there will also be a place for physics and mathematics, *since life has the aspects with which these sciences deal*. We can always go from more to the less, from the concrete to the abstract, but we cannot construct an adequate theory of life out of concepts derived solely from a consideration of its physical aspects. If we wish to know life,

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we must recognize its non-mathematical qualities. In short, *our metaphysics must be empirical.*

CHAPTER VII

THE ANSWER OF THE MECHANISTS

The reverence for science is at present so great that when a new idea or theory is announced, many reserve their decision until they learn what men of science think about the subject, and with the pronouncement of this authority they do not presume to differ. They accept the principle,—*scientia locuta est, causa finita est*. When a philosopher appears whose construction involves a very definite interpretation of science, the public naturally awaits with some interest the response of the investigators; it wishes to know how the new theory is regarded by the mathematicians, physicists, chemists, and biologists. In the case of Prof. Bergson, we have not had long to wait. There has just appeared a book, entitled "Modern Science and the Illusions of Prof. Bergson," by Hugh S. R. Elliot, which assumes to speak in the name of science, and by its authority to condemn as peurile illusions the ideas of the French philosopher. The work is introduced by Sir Ray Lancaster, K.C.B., F.R.S. In spite of this commendatory introduction, this production cannot

be accepted as "The Answer of Science." For, as Prof. G. Dawes Hicks justly remarks, the author "has no acute criticism to offer, and the volume is saturated with a kind of dogmatism which happily has now become well-nigh obsolete among genuine thinkers," and "one can only express regret that a distinguished man of science should give his sanction to anything so futile and irrelevant as this volume, for the most part, contains." The point of view of the critic and his sponsor is clearly stated. They agree in believing that science implies a materialistic conception of nature, and they condemn in a wholesale way as pernicious metaphysics all non-materialistic views. In his preface, Sir R. Lancaster says: "To me the conclusion has for many years commended itself — that the materialistic and mechanical scheme of nature (including man's nature) elaborated by physical science, is true and trustworthy, whatever there may be outside and beyond the possibilities of human knowledge." His opinion of the value of philosophy is curtly stated thus: "Our university professors of philosophy are maintained, it would appear, for the purpose of keeping a record of the very various and contradictory hypotheses of this motley crowd of assailants of a dead wall," and he quotes with approval the famous definition of the metaphysician as "a blind man in a dark room hunting for a black

cat — which is not there.” With such contempt for all the great constructive efforts of the human mind, *i. e.*, for all of them which do not arrive at a materialistic conception of nature and history, it is not strange that he should condemn the books of Bergson as “worthless and unprofitable matter, causing waste of time and confusion of thought to many of those who read them.”

On turning to the book which the distinguished biologist says “effects the exposure” of the “illusions and perversions” of Bergson “in a masterly way,” one finds the same estimate of metaphysics as “a maze of sesquipedalian verbiage,” and the frank avowal that “the attitude of this book is purely mechanistic.” One does not find, or even expect, a lucid account of the views criticised after reading the author’s admission that he does not understand them: — “Holding, as I do, that Bergson’s metaphysics are a cloud of words, carrying with them no real meaning, it will be necessary that an impartial exposition should likewise be verbose and cloudy.” This exposition may be passed over with the remark that it bears but slight resemblance to anything Bergson has ever said, and that nothing helpful is to be expected of an author who can write such a sentence as this: “The habit of using words without any significance is almost a disease with Bergson; as

soon as a phrase comes into his mind, which sounds well, it all goes down into his philosophy with its meaning never once considered."

There is only one objection urged by this writer that deserves to be considered, and this for the reason that he is perhaps speaking for Sir Ray Lancaster on a question of biological fact. He attempts to make a point against the conclusions which Bergson draws from the similarity between the structure of the eye in the mollusc *Pecten* and man. A mechanical biology might conceive of such an eye as built up by the accumulation of innumerable minute variations or a vast number of happily and almost miraculously co-ordinated variations. But when it is demanded that we conceive of two such series of happy accidents infinitely long and yet parallel, in conditions so different as those of mollusc and man, it is clear that the limits of credibility have been passed, and that the mechanical conception which requires such impossibilities of us is *in extremis*. The theory of probabilities demands that we seek in some other direction for an explanation. Now Mr. Elliot does not lessen the force of Bergson's argument by showing that the Pearly Nautilus has an entirely different eye, one constructed on the pin-hole camera plan. The difficulties for a purely mechanical biology in those two series of alterations, which are parallel in

every particular through long ages, remain. The Pearly Nautilus offers no special difficulty on Bergson's theory of adaptation, not as passive, but as active, as of the nature of the solution of a problem. Life, which has developed the two ways of knowing in man, and which in providing its creatures with so many varied means of defense, of securing food, of cross-fertilization, etc., might equally well under certain conditions employ the pin-hole camera device, instead of a lens, for focusing light and producing vision.

What gives this book its real value and makes it worthy of discussion is not its attempt to refute Bergson, but its contention that science rests upon and carries with it a materialistic philosophy, not only of the physical universe, but of life, not excepting that of man. It contrasts with Plato, "as the type of all that is bad in metaphysics," and with German idealism, "the thorough materialism which underlies modern science — a materialism which may be repudiated by men of science themselves, but which nevertheless lies at the basis of all their efforts." Speaking of Descartes, the author says that "it is not in the denial of consciousness to animals that Descartes demands our admiration: it is in the conception of them as highly complex machines or automata — a conception which in all probability is absolutely

correct; though, far from being limited to the lower animals, it must be extended to include also the human species." The following sentences deserve to be placed in italics: "*Science is completely, and without exception, materialistic. The progress of science therefore necessarily means the progress of materialism.*"

This statement is more important than it seems to be, issuing as it does from a man whose philosophic heroes are Epicurus, Lucretius, De Lamettrie, D'Holbach, Huxley and Du Bois-Reymond, and who, on coming to Spinoza in his survey of the progress of philosophy, remarks, "there is nothing particular to say about him, save that he evolved his system from the depths of his own mind, explaining the Universe as manifestations of an infinite impersonal substance." What makes it significant is that it expresses both the conviction of some scientific men, such as Sir Ray Lancaster, and the popular impression as to the metaphysical import of science.

True, it is seldom put as bluntly as this. According to this writer, "the whole of science is built upon materialism, as the whole of chemistry is built upon the atomic theory, and the foundation is secure," and "the history of scientific discoveries is a history of materialistic successes, for no scientific discovery has ever been made that is not based upon materialism and mechanism." Men of science are usually more

reserved. Many profess not to be interested in metaphysics at all, and refuse to discuss the presuppositions of their investigations. This is doubtless due to a feeling that it is more profitable to pursue their special researches than to inquire into their philosophic implications; and, in the case of teachers, there is the knowledge that an avowal of a materialistic philosophy may arouse hostility, since religiously trained students feel at once that it threatens interests which they have at heart. Still, Mr. Elliot is possibly right when, speaking of the theory that men are only conscious automata, he says that physiologists have very generally adopted it.

If this be so, if science necessarily involves and brings with it a materialistic philosophy, it is important that this fact be demonstrated and made perfectly clear. But if it is true that an acceptance of the results of science does not imply, or logically demand, the acceptance of such a philosophy, that fact also ought to be brought out into the light. There is a special reason for a clarifying discussion in the latter case. These matters have more to do with the real welfare of the average man than we might at first suspect. Many people are hard, narrow, and unhappy, and are living without the faith, hope, and peace which should be every man's possession, because their minds are imprisoned in a little rigid, mechanical philosophy into

which they are vainly trying to compress life. Often they have gotten into this sad state un-awares. Many of our young men who pursue scientific studies do not realize that there is an unconscious metaphysics underlying physical science. As Bergson points out, the men of science often declare that they have nothing to do with philosophy, yet, mixed up in their descriptions and analyses, there are often metaphysical assumptions which the student is led to accept unsuspectingly, and so he occasionally becomes a materialist without knowing it, and even while supposing that he has never philosophized. It is unrecognized metaphysics that is the greatest danger.

Bergson's critic will, therefore, perform a real service if he incites a discussion of these fundamental questions. In one of the finer paragraphs of his book, he says that "Between the advocates and opponents of a doctrine, only that side has anything to fear from discussion which is likely to be refuted. Impartial discussion always makes for truth, and those who drag in emotion, only obscure the issue and prevent the elucidation of the Truth. It is in their interest to do this, only when their faith is weak. The stronger their conviction, the more will they welcome an opportunity to defend it by sound arguments, the greater will be their resentment against those who knowingly falsify the discus-

sion by emotional heat. *Magna est veritas, et prævalebit* will be their motto."

If we are to accept the theory that mechanism is universal not only in the inorganic world, but also in the organic, we ought to do so consciously, and with a full realization of all that necessarily follows. Such a metaphysics ought not to be adopted unawares, merely as a result of a constant pre-occupation with physical processes which may gradually produce an impression that the deepest reality of the world is a vast number of atoms moving in accord with mechanical laws. The materialism of most young students of science is no more than just such an impression. The general views of reality in question may be outlined as follows: It is assumed that in the universe there is a fixed quantity of matter and also a fixed quantity of energy. Both matter and energy undergo ceaseless changes of form, but the total amount remains forever the same. What we call events are redistributions of matter and motion. A "machine is an instrument for securing that a transformation of energy from one specific form to another specific form shall take place with regularity." Nature makes machines and man imitates her. On this theory, "Man may be defined as a machine for converting chemical energy into motion." "He is like a toy or puppet, in which the arms, legs, and

movable parts, are drawn upwards and downwards by wires. Only it is a mechanical toy, in which the wires work of their own accord for a short time after they have been wound up, or heated, or supplied with chemical energy, such as food."

This is called the automaton theory, which was espoused by Huxley, and which he named epiphenomenalism. The essence of it "is that all the actions of men are explicable as purely material and mechanical sequences without invoking the assistance of mind or consciousness, or anything but matter and energy working under their ordinary laws. Consciousness appears only as *an inert accompaniment* of material cerebral changes." Few, I suppose, of those who entertain this view realize all that it implies. Yet its practical outcome is perfectly obvious. There can be no doubt about the consequences to which it leads and which cannot be escaped unless we renounce logic, or, either from fear or from lack of mental vigor, arrest our thought in its course. In order that we may avoid all suspicion of deliberate caricature or of distorting the theory by overstatement or in any other way, it will be well to accept the formulation of Mr. Elliot, who is spokesman for Sir Ray Lancaster, Prof. Huxley, and the mechanists in general. Consciousness, it is declared, is "an inert accompaniment of material

cerebral changes." It is not a cause of bodily action, for "Cause applies only to matter and motion: it cannot be alleged in stating the connection between mind and body." Thus, if I desire to raise my arm and in fact do so, the conscious desire is not the cause of the act.

"The precedent to the motion of the arm is not the mental desire, but the cerebral substratum underlying the state of consciousness called desire." "When we examined this new factor of consciousness we found it to be *possessed of no significance whatever, in accounting for the changes and events which occur in our visible and tangible world.*"

This is certainly explicit and clear. Observe the consequences. If consciousness is inert, it has no more to do with producing bodily action than have our shadows; if it is without any significance in producing physical changes, then all these changes would go on just as they do if it were nonexistent. If it does nothing, is perfectly inert, it might cease to be, and to a spectator of our human affairs nothing would appear to be changed. Men and women would act as if they suffered and enjoyed, but no feeling would accompany their gestures or cries. The physical object we call the hand of Shakespeare would hold a pen and make the characters we call letters, in this way producing the manuscript of Hamlet. Actors would represent

Othello, Desdemona, Cordelia and Lear, just as they do now, before masses of albuminous matter we call men. For, according to this conscious automaton theory, it is a mistake to think we go to theaters and symphonies for the enjoyment we find there. What sets our bodies in motion is not the desire for the pleasant excitement, but the nervous accompaniment of that desire, and the nervous system, being part of the physical mechanism of the world, is entirely unaffected by consciousness.

This theory asserts that what is physical has physical causes only, and since the action of Socrates in going calmly to his death for his ideals and principles was a physical action, a redistribution of matter and motion, his outward conduct would not have been changed if he had been an unconscious instead of a conscious automaton. Jesus, with his passionate sympathy and desire to save; Damiens, going to live with and die for the lepers; the mother, bending over her beloved child; the scholar, in his ardent and life-long search for truth; all men, in fact, who think they are really moved by ideals and conscious purposes, are under the same illusion. We are combustion engines, all our actions are physically explicable, and no motion that we make is swerved in the least by consciousness, the complex systems of materials constituting our bodies having at each moment

a certain configuration which was theoretically determinable thousands of years ago. To be sure, we are conscious, but the consciousness is only an epiphenomenon, an inert accompaniment. Like our shadows, it makes no difference in anything we do. Without it, no cause of physical movement in the world would be lost, the constant redistribution of matter and motion would proceed in the same way and by the same laws. We would be born, seem to fall in love, marry and rear children; civilizations would rise and fall; there would be the outward form of courts of justice and of churches filled with unconscious automata going through the motions of singing hymns and expressing aspirations for a better life. All our human activities would by the hypothesis go just as well without consciousness as with it.

This is not an unsympathetic caricature, but simply a statement of what the theory of epiphenomenalism comes to when it is held in a thorough-going and not half-hearted way. If we are only conscious automata, if consciousness accompanies physical processes but cannot influence them, we are ultimately driven to this. Well may the advocate of this view say that he who agrees with him in regarding it as true will "not brood over a false step once taken: for he knows that the necessity for it was implicit in the nebula of our solar system myriads of ages

ago, and that the consequences of it are similarly determined." A man of sense, when he arrives at such a conclusion, will suspect that something is wrong with the assumptions with which he started. He is much more sure that human life is an affair of purpose than he is of the truth of an abstract doctrine, according to which our life is nothing more than a puppet show. If he is not a philosopher, he may not be able to discover the source of the difficulty; but if he has the good fortune to read Bergson he will find the explanation of the whole matter. Whatever may be the fate of some of his suggestions, Bergson can hardly be wrong in his conception of the nature and function of the intellect. Spencer's definition of life, as the adjustment of internal relations to external relations, was valuable in that it called attention to the necessity of constant adjustment of the organism to its environment. The intellect, according to Bergson, is an instrument for effecting this adjustment. It has to do with the material aspects of existence, and its concepts or thought-frames, apply admirably in practical life and in physical science. When we turn from physics and chemistry and astronomy to the study of life, we naturally seek to use the same concepts. We treat the living like the lifeless. We carry the old habits into the new

field. We make, without realizing it, the unwarranted assumption that there is no difference between the living and the inert, and assume that life is a mechanism like the artificially isolated systems and objects which physics studies.

Strictly regarded, this is not a scientific mode of procedure. It is an *a priori* acceptance of a mechanistic view of life, an uncritical assumption of the adequacy for biology and psychology of thought-frames formed to deal with the inorganic world. The method of true science, when it seeks to understand an object, is to study that object directly. It ought to do the same with life. And if life is observed at first hand, without *a priori* theories brought over from physical investigations, it will be found to possess the qualities which Bergson describes, of freedom, creativeness, novelty, incalculability and irreversibility. The philosopher in this case is an empirical observer, and in stating what he finds, and refusing to do violence to facts or to deny them on the ground that they do not fit into a theory, he is a truer representative of science than the mechanical biologists who denounce his perceptions of truth as illusions. There actually is a difference between life and the lifeless, and when we try to force the former into the concepts or frames developed to deal

with the latter, we "feel these frames cracking." We are arbitrary in our procedure, and are doing violence to the truth.

To understand life, we must study it directly, as biologists and psychologists, and not as physicists agreeing to look only at its external aspects and excluding consciousness by definition. This truth has social consequences of the first importance. The human individual is something more than a machine, and unless the individuality of his life is regarded, he suffers injury. The progress of pedagogy reveals, with increasing clearness, the uniqueness of each life. The adoption of a graded system in the schools was a step forward in educational progress. It was an advance for the reason that, when great numbers of children are to be dealt with, some such plan is a necessity. Still, it is a system, a mechanism, and it was soon found that it rarely is perfectly suited to any child. Many children can hardly be included in the scheme, and some of them are greatly injured by the attempts of parents and teachers to conform their lives to an alien and rigid school machine. As systems are essentially inelastic, efforts are now being made to overcome the difficulty by increasing the number of the grades, so as to take account of differences between children that were formerly ignored. Special schools are also being established in the larger

cities for special groups, and other devices are being employed, all of which tend in the direction of the recognition of the uniqueness and individuality of each human life.

It is because of this that all our classifications of men are more or less unjust. Laws are cruel in their operation when no provision is made taking into account the special circumstances of the individual against whom they are enforced. It is for this reason, that the probation officer, the suspended sentence, the indeterminate sentence, the parole, etc., are being adopted by enlightened peoples in their dealings with their delinquent members. There is no way to be just to anybody except to treat him as an individual, as a person. Tolstoy's powerful story, "The Resurrection," which contains so much that is painful and revolting, describes, in some of the most vivid pages of all literature, the inevitable consequences of dealing with men in an impersonal way. He shows how many meet their death in tragic ways, not because they are treated with intentional cruelty, but because they are regarded abstractly, as so many units, and are dealt with by the state without regard to individuality and special needs. He says:

"If a psychological problem were set to find means of making men of our time — Christian, humane, simple, kind people — perform the most horrible crimes without feeling guilty, only one

solution could be devised: simply to go on doing what is being done now. It is only necessary that these people should be . . . convinced that there is a kind of business . . . which allows men to treat other men as things, without having human brotherly relations with them. . . . It all lies in the fact that men think there are circumstances when one may deal with human beings without love. But there are no such circumstances. We may deal with things without love — we cut down trees, make bricks, hammer iron without love — but we cannot deal with men without it. . . . Mutual love is the fundamental law of human life.”

CHAPTER VIII

LIGHT FROM BERGSON'S THEORY OF KNOWLEDGE UPON BIOLOGICAL PROBLEMS

The puzzles of evolution, its apparently insoluble difficulties, are largely due to the fact that we are studying life, not as biologists, but as physicists and chemists and philosophers with the mathematical ideal of knowledge. We voluntarily renounce all categories except the physical, and assume that the development of the structures of organic beings must be explained on purely mechanical principles. This is as if a man should tie up one hand that he might work better. The result is what it was bound to be, if life not only has physical aspects, but is something more besides. For many years now we have been trying to regard living creatures as machines and the infinite variety of their structures as due to the accumulation of small differences or variations, more or less accidental in origin, and preserved by natural selection. But the difficulties are too numerous and too great. Outer conditions can eliminate variations, but how can they produce

them? By adaptation? But this is an ambiguous word. Life is not shaped by external conditions as water is by the vessel that contains it. The response is not passive, but active; it is often of the nature of the solution of a problem. The progressive formation of the eye, its development from a sensitive pigment spot to the marvelously complex visual organ of man, is practically inconceivable without the intervention of other than mechanical causes. For, as Bergson concisely puts the difficulty, "Let us assume the Darwinian theory of insensible variations, and suppose the occurrence of small differences due to chance, and continually accumulating. It must not be forgotten that all the parts of an organism are necessarily coördinated. Whether the function be the effect of the organ or its cause, it matters little; one point is certain — the organ will be of no use and will not give selection a hold unless it functions. However the minute structure of the retina may develop, and however complicated it may become, such progress instead of favoring vision, will probably hinder it if the visual centers do not develop at the same time, as well as several parts of the visual organ itself. If the variations are accidental, how can they agree to arise in every part of the organ at the same time, in such way that the organ will continue to perform its function? Darwin quite understood this; it is one

of the reasons why he regarded the variations as insensible. For a difference which arises accidentally at one point of the visual apparatus, if it be very slight, will not hinder the functioning of the organ; and hence this first accidental variation can, in a sense, *wait for* complementary variations to accumulate and raise vision to a higher degree of perfection. Granted; but while the insensible variation does not hinder the functioning of the eye, neither does it help it, so long as the variations that are complementary do not occur. How, in that case, can the variation be retained by natural selection? Unwittingly one will reason as if the slight variation were a tothing stone set up by the organism and reserved for a later construction."

But even if we could conceive of a complex organ built up in the course of ages by the addition of an incalculable number of variations, how are we to believe in the possibility of two parallel series of happy accidents infinitely long? If we get over the difficulty of explaining the variations in a certain direction across countless generations; if we suppose the necessary correlative and complementary changes to have taken place in the cornea, lens, iris, retina, etc., how are we to explain the cases in which nature has worked out similar structures in divergent lines of evolution? For instance, there is the common Pecten, a mollusc, which has an eye very similar

to that of man. "We find the same essential parts in each, composed of analogous elements. The eye of the Pecten presents a retina, a cornea, a lens of cellular structure like our own. There is even that peculiar inversion of retinal elements which is not met with, in general, in the retina of invertebrates. Now, the origin of molluscs may be a debated question, but, whatever opinion we hold, all are agreed that the molluscs and vertebrates separated from their common parent-stem long before the appearance of an eye so complex as that of the Pecten."

Nor does the mutation theory make the matter more intelligible. It lessens the number of changes to be made to be preserved by selection, but as the changes are also greater, it is correspondingly more difficult to imagine how they could have taken place so as to have improved vision, or even so as not to have injured it. A considerable change, a mutation, in one part of the eye would destroy the vision unless there were correlative changes equally radical in all the other parts. The new complications would have to be adjusted to the old complications, and again we would have to suppose a parallel series of mere accidents to account for the likeness of the eye of mollusc and man.

And this is by no means all. The difficulties go on piling up; the biologists and zoölogists will be able to think of many others. The phe-

nomena of heteroblastia are particularly puzzling, so long as we continue to regard the body of a living creature simply as a machine. How does it happen, for instance, that "if the crystalline lens of a Triton be removed, it is regenerated by the iris? Now the original lens was built out of the ectoderm, while the iris is of mesodermic origin. What is more, in the *Salamandra maculata*, if the lens be removed and the iris left, the regeneration takes place in the inner or retinal layer of the remaining region. Thus, parts differently situated, differently constituted, meant normally for different functions, are capable of performing the same duties and even of manufacturing, when necessary, the same pieces of the machine. Here we have, indeed, the same effect obtained by different combinations of causes."

When confronted with facts of this kind, and these are only striking samples of a great multitude, we realize once for all the hopelessness of trying to account for them on mechanistic principles. The difficulties are too great. It would be easier to believe in miracles outright. On the other hand, when we try to apply the only teleological theories yet offered, it is clear that they do not work either. We therefore seem to have come to a stop. After wrestling with such difficulties day after day, the thinker is sometimes driven by sheer weariness and hope-

lessness to the verge of despair. He is tempted to admit that our intellectual ambitions far exceed our capacities, and for the moment to sympathize with the Philistine view that it is better to eat, drink, and enjoy the pleasures within our reach than to spend life in wrestling with probably insoluble problems.

It may be said that all this is negative, that others have shown that physical and chemical categories are not sufficient for the understanding of life. That may be admitted. Still, no one has done this so clearly and convincingly as Bergson, and it is something to be able to write "No Thoroughfare" over the path we have been trying to travel, and to save thought from necessarily futile efforts in the future. But he has done more than this. He has shown the nature of the difficulty, and at least pointed out the way to a solution. We have, he says, a mistaken idea of what constitutes an explanation when we deal with the problems of life. We are essentially tool-makers and tool-users, smiths. Our mechanical bias is all the more potent for being unsuspected, and we make the very natural but baseless assumption that nature is a manufacturer like ourselves, and that she builds up organic structures as we build our machines. If this were really so, some mathematician would be sure to anticipate biological discoveries as

Clerk Maxwell succeeded in doing in physics. But this has not happened.

Bergson thinks that if we wish to know life, we should observe it directly without prepossessions, and he tells us that when we do so it will be found that life is *sui generis*, that it actually has qualities or characteristics which differentiate it from a mechanical system. For instance, it is not a definite quantity; it is not all given; it is creative; it is constantly producing the new; it is irreversible and marked by an absence of repetition; in its progress it dissociates the tendencies it originally contains; it endures and changes with time. Now our habits of thought have been shaped not by converse with life, but by a constant engagement with matter. What we have had to know of life, we have known by instinct. Our faculty of conceptual thought has been molded on the material world with which it has to deal, just as our perception informs us only of those aspects of reality with which we have some practical concern. It is, therefore, inevitable that when we approach the study of life, we should seek to use the tools with which we have achieved so much and the limitations of which we do not understand. When we have to deal with that which grows, we assume that it has been manufactured. Accordingly we seek to find out how it has been made, that is, put to-

gether. The difficulty is, therefore, in us rather than in nature. We ourselves make a complexity of what is in itself comparatively simple. For instance, it is in virtue of our own mental constitution that we tend to regard organic structure as arising by the piling up of minute variations. Bergson's illustration is most felicitous. "An artist of genius has painted a figure on his canvas. We can imitate his picture with many-colored squares of mosaic. And we shall reproduce the curves and shades of the model so much the better as our squares are smaller, more numerous, and varied in tone. But an infinity of elements infinitely small, presenting an infinity of shades, would be necessary to obtain the exact equivalent of the figure that the artist has conceived as a simple thing, which he has wished to transport as a whole to the canvas, and which is the more complete the more it strikes us as the projection of an indivisible intuition. Now suppose our eyes so made that they cannot help seeing in the work of the master a mosaic effect. Or suppose our intellect so made that it cannot explain the appearance of the figure on the canvas except as a work of mosaic. We should then be able to speak simply of a collection of little squares, and we should be under the mechanistic hypothesis. We might add that, beside the materiality of the collection, there must be a plan on which the artist worked,

and then we should be expressing ourselves as finalists. But in neither case should we have got at the real process, for there are no squares brought together. It is the picture,—i. e., the simple act,—projected on the canvas, which, by the mere fact of entering into our perception, is *decomposed* before our eyes into thousands and thousands of little squares which present, as *recomposed*, a wonderful arrangement. So the eye, with its marvelous complexity of structure, may be only the simple act of vision, divided *for us* into a mosaic of cells, whose order seems marvelous to us because we have conceived the whole as an assemblage.” Bergson then shows that we can make the same difficulty in the case of a movement of the hand that we find in the development of an eye in the evolution of life. The movement may be simple, and not demand great intelligence to make it. But, if we have to conceive of it as an infinite series of positions successively occupied, and to take into account their order, we have transformed a simple action into a very difficult problem. For the movement “is not intelligent, in the human sense of the word, and it is not an assemblage, for it is not made up of elements. Just so with the relation of the eye to vision. There is in vision *more* than the component cells of the eye and their mutual co-ordination: in this sense neither mechanism nor finalism go far enough. But in an-

other sense mechanism and finalism both go too far, for they attribute to Nature the most formidable of the labors of Hercules in holding that she has exalted to the simple act of vision an infinity of infinitely complex elements, whereas Nature has had no more trouble in making an eye than I have in lifting my hand. Nature's simple act has divided itself automatically into an infinity of elements which are then found to be co-ordinated to one idea, just as the movement of my hand has dropped an infinity of points which are then found to satisfy one equation."

Evolution, Bergson thinks, becomes more comprehensible, if we start with the idea of life, an original impetus, a tremendous internal push. The occurrence of variations in the right direction, generation after generation, may then be regarded as "the development of an impulsions which passes from germ to germ across the individuals." According to the mutation theory, an entire species is sometimes beset with a tendency to change. This is explicable, if there is an orthogenesis, if there is an impulse in a definite direction lasting through many successive generations. We may even conceive of this impulse as of a psychological nature and admit that there is something in the neo-Lamarckian view of effort, but it is "an effort of far greater depth than the individual effort, far more inde-

pendent of circumstances, an effort common to most representatives of the same species, inherent in the germs they bear rather than in their substance alone, an effort thereby assured of being passed on to their descendants." On the theory of a common impetus, we may form some notion of the way in which animals so different as molluscs and vertebrates have eyes so much alike. While it is true in general that species that diverge from a common stock accentuate their differences as evolution proceeds, yet, in certain points, they may evolve identically in virtue of the common impetus which is their source. In the same way, other perplexities begin to clear up. Although the progress of life is marked by a dissociation of the tendencies it originally contains, this separation is not absolute. *There is something of all life in each of its forms.* "There is no manifestation of life which does not contain, in a rudimentary state — either latent or potential — the essential characteristics of most other manifestations. The difference is in the proportions. But this very difference in the proportions will serve to define the group if we can establish that it is not accidental, and that the group as it evolves, tends more and more to emphasize these peculiar characters. In a word, the group must not be defined by the possession of certain characters, but by its tendency emphasize them."

This is a profound and fruitful thought. It may ultimately enable us to understand much that is now obscure and seemingly inscrutable in nature. If it is merely a question of emphasis, if the whole of the vital impetus is in a sense in every species and every creature, we can understand that under exceptional circumstances some of the sleeping tendencies may be awakened, as in the case of insectivorous plants, which, in a crisis when nutrition threatened to fail, have developed their faculty of capturing, absorbing and digesting insects. Something of the whole abides in all parts. Man retains some measure of instinct which is seen at its highest development in the social hymenoptera, while these are not utterly devoid of the intelligence which is our special endowment. As an example, Bergson points to the parallel progress which has been accomplished by plants and animals in the direction of sexuality. In this case the kinship is even more remote than that between mollusc and man. Yet in the higher plants and animals, fecundation is the same in that it consists "in the union of two nuclei that differ in their properties and structure before their union and immediately after become equivalent to each other; but the preparation of sexual elements goes on in both under like conditions: it consists in the reduction of the number of chromosomes and the rejection of a certain portion of the

chromatic substance." When we consider the millions of years since animals and plants diverged from the parent stock, the difference in their circumstances and in the difficulties they have had to meet, the differentiation in each case, into hundreds of thousands of species, the extent to which the sexual processes are parallel in so many and such diverse forms is certainly remarkable, the more so when, in certain cases at least, the sexuality of the plant appears to have no utility, but to be a luxury which might have been dispensed with.

Except on the hypothesis of a common and persistent impulse it is not only difficult to understand the presence of identical organs in very different organisms, but without some such internal push or urge it is difficult to see *why there has been evolution at all*. "A mere glance at fossil species shows that life need not have evolved, or might have evolved only in very restricted limits. Certain Foraminifera have not varied since the Silurian epoch. Unmoved witnesses of the innumerable revolutions that have upheaved our planet, the Lingulæ are to-day what they were at the remotest times of the palæozoic era." Adaptation is a condition of evolution, but not a cause. "The truth is that adaptation explains the sinuosities of the movement of evolution, but not its general directions, still less the movement itself. The road that

leads to the town is obliged to follow the ups and downs of the hills; it adapts itself to the accidents of the ground; but accidents of the ground are not the cause of the road, nor have they given it its direction." Still less, Bergson might have said, is the shape of the road the cause of the farmer who must travel along it to get to town.

Herbert Spencer was really facing the necessity of some such hypothesis as that of the life impulse when, in the revised edition of his "Principles of Biology," he reconsidered his famous definition of life as "the adjustment of internal relations to external relations." He asked himself, relations of what? and could give no answer. So he said that it was one more instance in which it was necessary to face the Unknowable. It was his method to pool all cases of persistent and seemingly insuperable human ignorance, to give the collection a name and spell it with a capital. The difference between him and the specialists who deride his philosophy seems to be that he was a monistic agnostic while they remain pluralists. To Bergson's suggestion that life is a reality, an activity that endures through time, and that evolution is its achievement, many are likely to reply with the question,—Is not this going backward? Are you not taking up again the obsolete concept of substance and explaining a process by giving it

a name? Is not life in the same category as caloric and phlogiston? Is not this a relapse into the exploded theory of vitalism?

Not at all. We know very well what we mean by life in ourselves. We know that we are something more than a series of reflex movements, of mechanical actions performed in response to external stimuli. In our life there are reflex actions and physical and chemical processes; nevertheless, there is a more or less conscious unity also, a direction is maintained, there are purposes worked out in the course of which we employ inventive faculties and in a measure control the forces of the material world. What Bergson means is that the power behind or in evolution is something like the life in us, although he denies it the conscious purpose of realizing a plan. But it is rather more, not less, than we, since much that it contains is latent in our endowment. We see the individual triumphing over difficulties and keeping his direction through many years. We are not mystics or obscurantists when we speak of a human life, for what is meant is perfectly understood. All Bergson means is that something like this is at the heart of things, something that tries and often fails but sometimes succeeds, that has developed the human intellect as one of its instruments, that lives and grows through time, and has in the long process of evolution moved in

the direction of freedom. It is easy to caricature his view, but the truth-seeker cannot be either a caricaturist or a captious critic. And I am willing to venture the belief that some such theory as this of a cosmical life force has a future, and will more and more gain acceptance, for the double reason that evolution becomes inconceivable without it, and that it is practically identical with the truth that religion has always carried in its heart.

CHAPTER IX

CONSEQUENCES OF BERGSON'S THEORY OF KNOWLEDGE FOR PRACTICAL LIFE AND THE PHILOSOPHY OF RELIGION

Evolution has not been linear; life has not described a single course, but has proceeded along divergent directions. The many tendencies it contains are dissociated as the advance is made, and the species in which they find expression become complementary and sometimes antagonistic. The unity of life is that of the impulse that pushes it along, and harmony is behind us, not before. The life force meets with real obstacles in the refractory nature of the matter which it organizes, and its failures have been many, its successes few. "Progress is accomplished only on the two or three great lines of evolution on which forms ever more and more complex, ever more and more high, appear; between these lines run a crowd of minor paths in which, on the contrary, deviations, arrests, and set-backs are multiplied." The Great Life seems in one fundamental respect to be like its human

expressions; it can not develop all its possibilities at once. As Bergson says, "Each of us, glancing back over his history, will find that his child-personality, though indivisible, united in itself divers persons, which could remain blended just because they were in their nascent state: this indecision, so charged with promise, is one of the greatest charms of childhood. But these interwoven personalities become incompatible in course of growth, and, as each of us can live but one life, a choice must perforce be made. We can choose in reality without ceasing; without ceasing, also, we abandon many things. The route we pursue in time is strewn with the remains of all that we might have become." The difference is that Nature, having an incalculable number of lives at her command, can preserve these different tendencies by giving them expression in different species which evolve separately.

The first great bifurcation resulted in the separation of the organisms that are able to fix the carbon and nitrogen everywhere found from the organisms that are mobile and conscious. The plants store up potential energy while the animals are releasing mechanisms. Now, since mobility and consciousness go together, the vegetable world is sunk in torpor or profound sleep. And of the four main directions in which animal life has evolved, two have led into blind al-

leys. The molluscs and echinoderms, in order to defend themselves, have shut themselves up in armor, and so have fallen into the lethargy from which the arthropods and vertebrates have escaped. But even in the highest forms reached along these two lines, in the insects and in men, the victory is not won for all time. Eternal vigilance is the price of our liberty. Automatism is a constantly besetting danger. We cannot attain a high development without forming habits, and these tend to become numerous and rigid and so transform us into automata. Thought cannot be communicated unless it is expressed, and the form it takes tends to become a prison. The letter kills the spirit. "The word turns against the idea." Nietzsche, in his lively way, put it thus: "Wherever primitive man put up a word, he believed he had made a discovery. How utterly mistaken he really was! He had touched a problem, and while supposing he had solved it, he had created an obstacle to its solution. Now, with every new knowledge we stumble over flint-like and petrified words, and, in so doing, break a leg sooner than a word." From this point of view, the late Prof. Thomas Davidson was not merely paradoxical but had some reason on his side, when he declared that it was a fixed principle with him to form no habits, and that when he observed them growing up he put an end to

them immediately lest he should finally become fettered by them. Bergson is constantly telling us that life has no pre-conceived plan, but he is also constantly saying that life is an effort to realize freedom which has been to some extent attained in man, though even in him it is in constant danger.

Life, then, in the Bergsonian world-view, is a current of consciousness which has penetrated matter, and is carrying it along to organization. Mind, in its totality, is composed of the complementary powers of instinct and intelligence. This complete endowment life has not been able to bestow on any of its creatures, so a distribution has been made. The mind of man is mostly intellect with some instinct, while the mind of ants, bees and wasps is mostly instinct with some fringe of intelligence. There have thus been two divergent solutions of the same problem. For the vital impetus in organizing refractory matter had and has a real problem. Mind, in both its varieties, is an instrument for grappling with difficulties. If all adjustments were perfect and life simple and easy, it is probable that consciousness would cease. The intellect is an instrument which we use when we get in trouble. When we face a perplexity, we think. Consciousness seems to be a light that illuminates difficult situations when we are called on to choose, and is apparently proportionate to the power of

choice. In deliberation, when we are trying to represent in our minds all the factors that ought to influence our actions, to weigh them and attribute to each its relative importance, consciousness is intense. A complete and final success in solving all difficulties might, therefore, much as we strive for it, be fatal to all that we prize in life, and force us willy-nilly into Nirvana.

Nothing that Bergson has written is likely to cause more discussion than his elaborate effort to show that instinct and intellect are not different degrees of the same faculty, but are opposite and complementary tendencies which have become dissociated in the process of growth. "The cardinal error which, from Aristotle onwards, has vitiated most of the philosophies of nature, is to see in vegetative, instinctive and rational life, three successive degrees of the development of one and the same tendency, whereas they are three divergent directions of an activity that split up as it grew." He thus insists that the difference is one of kind. If such a view can be established, it will obviously be necessary for biologists and psychologists to revise their ideas on the subject, and profound practical consequences will result for pedagogy, sociology and practical life.

Herbert Spencer and others have tried to show that intelligence evolves from instinct, which is itself a compound reflex. The theory

of "lapsed intelligence" has been advanced according to which instinct is a habit which was formed intelligently, but has become automatic. Then there is the biological view according to which instinct is the function of a structure which has been gradually built up and represents a multitude of minute "advantages accumulated and fixed by selection." Our philosopher does not quarrel with these views nor dispute their truth, and he agrees that in trying to so conceive instinct science is within its function. In fact, he explicitly admits that "many secondary instincts, and also many varieties of primary instinct, admit of a scientific explanation." What he claims is that this is not the whole truth, and that if instinct be looked at in the large it will be found not to be a form of intelligence, but radically different in nature. His discussion is extraordinarily interesting and illuminating, and even if the reader remains unconvinced by the arguments advanced, he is certain to be instructed by the fresh and original treatment.

The first impression is that the case has been overstated, and this is frankly admitted at the outset by the writer himself. He says that the exigencies of lucid exposition have forced him to draw the distinction too sharply, but that he does so deliberately because it is so important to attain to clearness in this obscure matter, and that it will be easy enough afterward to soften

the outlines and correct what is too geometrical in the drawing. Without attempting a restatement of his view, the main difference between intelligence and instinct may be briefly set forth as follows: Intelligence is a faculty of making and using tools and especially tools to make tools, while instinct is the faculty of making and using organized instruments. The former is susceptible of general application; the latter utilizes a specific instrument for a specific object. Change the situation and instinct is helpless; intelligence is just the power of meeting new difficulties. If we distinguish between the form of knowledge and the matter, it is clear that intellect has to do with the former, instinct with the latter. The reason the concept of substance has proved so elusive in the history of philosophy is that the question as to what an object is is always asked by the intellect, and it can never find the answer since it has to do only with the outsides of things. Instinct knows; in fact, it "is the innate knowledge of a thing." The trouble is that instinct does not speculate. It could answer, but it won't ask. The situation then is that "There are things that intelligence alone is able to seek, but which, by itself, it will never find. These things instinct alone could find; but it will never seek them."

This, then, is the Bergsonian theory of the source of our metaphysical difficulties. And this

is why Mr. Bradley could say that metaphysics is a seeking of bad reasons for what we believe on instinct, but to seek them is no less an instinct. We have a one-sided mental development; the intellect, that part of mind which is curious and wants to know what things are, is very highly evolved in us, while instinct, the complementary faculty, that gets at the heart of reality, is proportionately weak. However, the latter capacity is present in us and may be strengthened, so that our mental life may be more nearly complete. *The implication is that so far as we do know what anything is, what we are, what life is in us and in the universe, what God is, we know it through insight and not by reasoning. The philosophic view of the world would be that of the man in whom both of these complementary powers of the mental life were well developed. His intellect would look out and ask questions about the material world, questions which the intellect, using scientific methods, can answer. The same intellect would also look in and ask questions about the heart of life, both of self and of God, and instinct, developed into intuition, would give a true and satisfying reply.*

The nature of instinct is so peculiar that it has been uncertain whether it is a biological or a psychological concept. It appears to be a form of knowledge that is acted and unconscious,

but, since the term knowledge carries with it the implication of thought and consciousness, instinct seems to be a contradiction both in definition and in reality. The more perfect it is, the more obviously unconscious it is seen to be. Only when it begins to fail, when the adjustment is insufficient, is there evidence of conscious intelligence. Bergson makes a great deal of this. Consciousness appears, he says, only in difficult situations. It is inversely proportional to the perfection of the structures whose function we call instinct and the adequacy of their response to the needs of life. The intellect is resorted to in time of trouble. When we are "at our wits' end," as the saying is, the conscious intellect is stimulated to the utmost, and its resources of ingenuity and invention are called into play. It is just because some instincts are cases of such perfect adjustment that we may suppose them to be unconscious. Representation becomes necessary when action is stopped, but is itself obstructed by action. It is in virtue of this fact that some consider that instinct lies without the province of psychology. Certainly, experience has shown the futility of trying to understand the instincts of animals in terms of human intelligence. I was once a member of a seminar in animal psychology, the net result of which seemed to be that each one who shared in the discussions had a deeper sense of

the complexity and obscurity of the subject. Bergson would say that without the distinction he makes, all attempts to understand the psychic life of animals must end in a similar way. For him, the primal reality is life, which has *two ways of knowing*, and nothing but confusion can result from attempts to state either one of these in terms of the other.

A little boy, being asked for his idea of the difference between instinct and intelligence, said, "The animals have instincts, and know everything they need to know without going to school. Man is blessed with the gift of reason, and so has to study himself almost blind or be a fool." This, which is a schoolboy's expression of the popular view, does not do justice to the fact that intelligence, as well as instinct, is to a certain extent innate knowledge, since the young child understands immediately things that an animal will never understand, and that without learning them. But this knowledge is of the outsides, the forms, the relations of things. Hume was therefore entirely right, even though his use of terms was peculiar, when, to the question, What is intelligence? he replied,—It is an irrational instinct. It is the fashion of some to contrast the intellect with life, whereas it is, even in its most critical forms, itself an expression of life. The only justification for the theory which opposes intelligence to life,

according to Bergson, is the fact that instinct knows life from the inside, while intellect gives the outside view. The former possesses knowledge of the intimate secrets of the life-force, for the reason that "it only carries out further the work by which life organizes matter — so that we cannot say, as has often been shown, where organization ends and where instinct begins. When the little chick is breaking its shell with a peck of its beak, it is acting by instinct, and yet it does but carry on the movement which has borne it through embryonic life. Inversely, in the course of embryonic life itself (especially when the embryo lives freely in the form of a larva), many of the acts accomplished must be referred to instinct. The most essential of the primary instincts are really, therefore, vital processes."

One may well pause at this point for reflection, for he who realizes the full significance of the undoubted fact that *instinctive processes are but a continuation of organic processes*, will find himself face to face with the greatest of all problems, and may even see a light shining on his path. For, let us grant that instinct is a prolongation of life, is, in fact, life itself. Then if it could be shown that any moral reaction or conviction, or any purified religious belief, was a genuine primary instinct, the validity of such conviction or belief would be

established in the most complete manner imaginable. *Such an instinctive belief would be life's declaration of its own nature.* If man really is endowed with moral and religious instincts, the philosophers and ministers and teachers of religion and the promoters of ethical culture have their task clearly outlined. It is to appeal to these latent forces in human nature and develop them till they become clearly self-conscious, until they pass from the stage of dumb feeling to intuition. Those who are devoted to pure and applied science must continue to rely upon the intellect; Bergson's intuitive method will be of most use to philosophers, preachers, artists and moral, social and political leaders. On this theory, even practical men, who owe a large part of their success to their intuitive perception of the sentiments and feelings of their fellow men, might be still more practical and successful if they understood the method they instinctively use. For it is upon this that the management of men depends. In some few individuals, it is a gift and amounts to genius. They may start as section men or brakemen on the railroad, and have but little education, but they understand so well the human factors of a great enterprise that they sometimes rise to the highest positions, and become managers and presi-

dents, directing the activities of engineers and other specialists whose intellects are efficient instruments for building bridges and digging canals. To control men, it is necessary to have sympathetic insight into their inner life; to control nature, on the other hand, it is necessary to be able to think scientifically and then, having discovered how natural processes go on, to have the power to contrive, build and use machines for turning these processes to human advantage. If men were machines, we might have schools of social engineering, and be able to supply the demand for leadership. As it is, however, we have no methods of manufacturing social perception and producing insight into other lives. Psychology, *e. g.*, can furnish much useful information, but it cannot make any one a good teacher. It may show the young pedagogue what he must avoid, and make clear certain principles to which all good teaching must conform. But all these are general considerations and outside views. And the spectacle of a teacher in the presence of a young life, individual and unique, seeking to give instruction by applying remembered formulæ, would be amusing if it were not so pitiful. Failure is the certain and necessary result of all attempts to treat the living like the lifeless. The history of pedagogy confirms what Bergson tries to

explain, namely, the view "that the intellect is characterized by a natural inability to comprehend life."

The question naturally arises, how is insight into other lives possible? Take a concrete case, that of the *Sitaris* beetle, which Bergson cites. "This insect lays its eggs at the entrance of the underground passages dug by a kind of bee, the *Anthophora*. Its larva, after long waiting, springs upon the male *Anthophora* as it goes out of the passage, clings to it, and remains attached until the nuptial flight, when it seizes the opportunity to pass from the male to the female, and quietly waits until it lays its eggs. It then leaps on the egg, which serves as a support for it in the honey, devours the egg in a few days, and, resting on the shell, undergoes its first metamorphosis. Organized now to float on the honey, it consumes this provision of nourishment, and becomes a nymph, then a perfect insect." Everything happens as if the larva, from the moment it was hatched, knew the things it would have to do, and as if the *Sitaris* knew that its larva would know them. Another striking instance is that of the wasp that stings its victim so as to paralyze but not kill it. This looks like knowledge, but we can be certain that it is not knowledge of the kind the intellect possesses. On the other hand, it is more marvelous than the insight that men have

into one another's lives, for this is instinctive knowledge of one species by a very different species. Bergson makes the suggestion that such instincts have their "root in the very unity of life," which is, in spite of all the differentiation that has taken place, a "whole sympathetic to itself." Is it in virtue of the unity of life that the great dramatist or novelist portrays with such surprising success the characters and motives of "all sorts and conditions of men," of women, of old and young, criminals and saints?

The superficial reader of this theory of knowledge may get the impression that Bergson is to be classed with the anti-intellectualists, but this would be incorrect. He has no sympathy with mystics in their reaction against positive science. "The doctrine which I hold," he says, "is throughout a protest against mysticism since it proposes to reconstruct the bridge (broken since Kant) between metaphysics and science." He seeks to show that our knowledge is not relative, but, so far as it goes, real and valid; that it touches the absolute; that the intellect knows the world of matter in part, but to this extent *knows it as it is*. He is peculiar in this, that whereas Kant regarded all our intuitions as sensuous and infra-intellectual, he tries to show that there is an intuition of the psychical and vital, an intuition that is supra-intellectual. If he lays

emphasis upon this part of our mental endowment, it is because it is as important as it is neglected and undeveloped. It throws a light, feeble indeed, but the only light we have, upon subjects of the greatest interest to us and about which the intellect can not tell us all that we need to know,—upon “our personality, our freedom, the place which we occupy in the whole of nature, our origin and perhaps also our destiny.” His thought has been expressed by Wordsworth in the famous “Ode on Intimations of Immortality from Recollections of Early Childhood” :

“Hence, in a season of calm weather,
Though inland far we be,
Our souls have sight of that immortal sea
Which brought us hither,
Can in a moment travel thither,
And see the children sport upon the shore,
And hear the mighty waters rolling evermore.”

CHAPTER X

THE PRAGMATIC VIEW OF SCIENCE AND COMMON SENSE AND THE SYNOPTIC VIEW OF PHI- LOSOPHY

The main difficulty in understanding "Creative Evolution" lies not merely in the novelty and originality of its ideas, but in the poverty of our categories and the fixity of our mental habits. We find it hard to grasp the writer's meaning, and, having grasped it, to hold it, because we are *too intellectual*. Life is a much larger thing than intellect in the narrow sense, the latter being merely an implement which life has formed to enable it to deal successfully with what is not living. That is, we tend to conceive of reality in practically useful ways and to neglect every aspect of it which does not seem to concern our welfare. As soon, however, as men attain a certain measure of success in dealing with the practical problem of existence, when security and social order are established, the philosophic interest awakens, and the desire to know the truth of things becomes ur-

gent. When this reflective period arrives, it becomes necessary to criticise views of the world previously held, to examine their foundations and their adequacy, and to seek for rationality, consistency and completeness of thought. Now, according to Bergson, the intellect, the concept-making and using part of the mind, is an admirable instrument for practical purposes, but it is incompetent in speculation. At least, the views it takes of reality must be deepened and supplemented by insight into life. He regards life as a current which flows through time, and which has developed the mathematical, mechanical, tool-making, and tool-using understanding as an implement in dealing with that inverse current which we call matter. When applied to the material world, the intellect is marvelously successful, but it is constitutionally incapable of understanding life. We have many experiences that the geometrical, artisan mind can not understand. But, since philosophy has so largely to do with life, it is a hopeless undertaking unless there is more in mind than the intellect, unless we have other powers complementary to that of logical and conceptual thought. We cannot understand life with an instrument all of whose categories are material, whose thought-frames have been constructed to enclose the facts of that flux which is matter, and are therefore inapplicable to the events and

experiences of that inverse flux which is life; but we have, most fortunately, a power which may be so developed as to give us a vision into the very heart of life itself. This is instinct, which, when it has evolved and become self-conscious, is intuition.

This view of the nature of the mind as composed of an intellect that is a useful instrument for dealing with the physical world, and that even knows the very truth of matter, and of an instinct that knows life and the things of life, and of philosophy as the combination of the contributions of both into a synoptic view, is very interesting and plausible, and if it is true, enables us to understand much that is otherwise obscure. We see at once, for instance, why the majority of men are such poor philosophers. They have to make their way in a material world, their very existence depending upon their ability to understand and control the forces of nature. In the performance of their necessary task, they become one-sided, that is, too intellectual to philosophize well. Their intuitive faculty is weak, although it is strong enough to enable them to realize that through it they know some things not to be known in any other way. Furthermore, since the human environment is a very important part of every man's environment, since his success or failure depends largely upon the attitude of his

fellow men, instinctive understanding of the feelings, intentions and reactions of others has always had a certain practical value. It is a matter of common knowledge that teachers who have no organic sympathy with young life, no intuitive understanding, cannot be made good teachers by courses in pedagogy. Success in the ministry, in business, political and social life, depends largely on the same factor.

Still, it remains true that our intellectual bias is so great that we tend to regard everything we try to understand as a mechanism, and this almost incapacitates us for philosophizing about life.

Our fixed habits of thought interfere even with our perceptions. Thus, in talking with a painter and watching him at his work, I was much surprised to find that in his nature sketches he sometimes used purples and browns in representing the meadows and fields. I had supposed that all grass was green, and, even when he pointed to a portion of the lawn outside in deep shadow, it was difficult to see what he saw. The idea that grass must be green was so fixed that simple perceptions were difficult. Most of us have lost that innocence of the eye which is a condition of success for the artist. And, when we try to draw or paint, we seek to express what we suppose that we know instead of what we actually see. A

teacher of art tells me that children before the age of six are unsophisticated, and by the way they choose their colors show that their perceptions are still undisturbed by their concepts. For this reason, she considers it very important that their artistic training should begin at a very early age. Art as well as philosophy must see the world with fresh eyes, and the confirmed utilitarianism of our mental habits incapacitates most of us for both.

It is a difficulty of this kind that confronts the reader of Bergson. He is told that matter is a current and life is a current, and the statement strikes him as paradoxical. To him the world is a collection of objects, such as trees, hills, mountains, plains and seas.

“The world is so full of a number of things,
I am sure we should all be as happy as kings.”

For practical purposes, the world may be so regarded. But for the purpose of deeper thinking, this view must be dropped. In fact, the world is not composed of things. It is a *continuum*, a flux. The reality is a universal interaction. The mountain seems to be one thing, and the plain another; but the line of separation is arbitrary, and both are continuous with a larger whole. The way we divide the world up into objects, things, is determined by the actions we have to perform. “It is doubtful

whether animals built upon a different plan,— a mollusc or an insect, for instance,— cut matter up along the same articulations.”

It is hard, therefore, to remember that matter is not a collection of things, but a flux, a stream, a current that flows; but it is necessary if our purpose is to understand, rather than act upon, the world. In this connection it is very interesting to read an account of the most recent researches in radioactivity. If any readers of Bergson have been tempted to regard his view of matter as purely speculative and fantastic, they are recommended to compare it with the latest conceptions of science as set forth in such a book as “The Electrical Nature of Matter and Radioactivity,” by Harry C. Jones, Professor of Physical Chemistry in Johns Hopkins University (Second edition, 1910). They will there learn that recent discoveries force us to regard the chemical atom as unstable. The clearest case is that of radium, which in its progressive disintegration undergoes a complete series of transformations, starting with uranium and ending with lead. Some of the changes require a few minutes, others many years. But what is true of radium may be to some extent true of all matter. Says Prof. Jones, “If it should be shown that all matter is slightly radioactive, then we should be forced to the conclusion of the general instability of the chemical ele-

ments. . . . There is some evidence that many of the elements are radioactive to a very slight extent. If this should be proved to be due to the elements themselves, to be a property inherent in all matter, and not caused by the disposition of some form of radioactive matter, then we must regard matter in general as undergoing change. This change is slow, very slow, but is progressing continuously; the more complex, unstable forms breaking down into simpler aggregates of electrons." The changes go on spontaneously, and are "largely unaffected even by the most extreme artificial conditions," so that we are by no means able to effect the transformation of one element into another by artificial means.

But what are these electrons? They are the elements which enter into the formation of the chemical atom, which is now regarded as very complex, the atom of mercury, for instance, containing more than 150,000 of them. "The electron is a disembodied electrical charge, containing no matter, and is the term which we shall hereafter use for this ultimate unit, of which we shall learn that all so-called matter is probably composed." . . . "Is not all matter of an electrical nature? There is a large amount of evidence which answers this question in the affirmative. Indeed, this conclusion is accepted, at least tentatively, by a large number of the

leading physicists and physical chemists the world over."

In 1895 a famous paper was published by Ostwald on "The Overthrow of Scientific Materialism." Apropos of this, Prof. Jones remarks: "Whatever our opinion of the paper as a whole, there is one point at least brought out so clearly that there can scarcely be any question about it, and that is, that matter is a pure hypothesis. What we know in the universe, and all that we know, is changes in energy. In order to have something to which we can mentally attach the energy, we have created, in our imagination, matter. Matter, then, is a pure hypothesis, and energy is the only reality. We are accustomed to take exactly the opposite view, and regard matter as the reality and energy as hypothetical. If Ostwald accomplished nothing else by the paper in question than the mere calling attention to the hypothetical nature of matter, he made an important contribution to science. It should be noted that for a long time Ostwald has insisted not only that matter is a pure hypothesis, but that there is not the least evidence for its existence, as we ordinarily understand the term. It is interesting to note that Thomson has reached the same conclusion as the result of one of the most brilliant series of experiments that has ever been carried out in any branch of experimental science. We

have thus direct experimental verification of a conclusion, the importance of which it is difficult to overestimate." Pp. 22-24.

Bergson's writings do not give the impression of familiarity with physical chemistry, and the fact that substantially the same dynamic conception of matter has been reached by two independent methods of approach is certainly significant. There must be something in a philosophic method when its results are confirmed by experimental science. It is tempting to consider what is involved in this agreement, but an adequate discussion would take us too far afield, and I can only say here that those who have interest enough to go into the matter will probably meet with some of the most exciting experiences in their intellectual career.

Holding fast, then, to the truth that matter is a process, let us consider that we must take a similar view of life. Here, too, we are accustomed to think of living beings as individuals, as isolated and distinct. And in this we have partial justification, for a highly organized living being is the nearest approach to individuality, to a closed circle, that we find in nature. Still, the truth is that life also is a flux, a vast current moving through time, a great wave of which each of us is, so to speak, but a rill. "Creative Evolution" puts the matter concisely:—

“An organism such as a higher vertebrate is the most individuated of all organisms; yet, if we take into account that it is only the development of an ovum forming part of the body of its mother and of a spermatozoon forming part of the body of its father, that the egg (*i. e.*, the fertilized ovum) is a connecting link between the two progenitors, since it is common to their two substances, we shall realize that every individual organism, even that of a man, is merely a bud that has sprouted on the combined body of its parents. Where, then, does the vital principle of the individual begin? Gradually, we shall be carried further and further back, up to the individual's remotest ancestors; we shall find him solidary with each of them, solidary with that little mass of protoplasmic jelly which is probably at the root of the genealogical tree of life. Being, to a certain extent, one with this primitive ancestor, he is also solidary with all that descends from the ancestor in divergent directions. In this sense each individual may be said to remain united with the totality of living beings by invisible bonds.”

In practical life we must consider the world as a collection of objects and peopled by individuals; but in philosophy, which seeks to know reality, we must view “life as a whole, from the initial impulsion which thrust it into the world, as a wave which rises, as a current

flowing through the generations, which is opposed by the descending movement of matter." Now, according to the theory under examination, the great difference between instinct and intellect is that through the latter we are able to deal successfully with the material flux, while only the former enables us to comprehend life itself. In virtue of this fundamental difference, it is vain to seek to know the laws of physical processes by intuition, and equally vain to try to understand life and spiritual experience through concepts molded upon and applicable only to the material world. A vast amount of mental confusion and conflict between men has, indeed, come from attempting to apply to life the categories that are applicable only to things. In chapter I. of his "Individualism," Warner Fite shows the consequences of the shallow philosophy which regards men as things. If two billiard balls approach each other on the same path, a collision is inevitable; but two men may so approach and yet make way for each other. The more conscious we are, the more truly men, the more it is possible to adjust all our interests, and our wars and conflicts are evidence of the degree to which we are still things rather than men.

The ravages of such a misapplication of concepts in history have been incalculable. And there still linger among us thinkers who liken

the great nations to the grass blades on a lawn or the seedlings in a forest. As they grow, they begin to press upon one another, then there comes strain, then war, then a new equilibrium which in time is upset by further growth. There is truth in the doctrine, for the reason that we are incomplete personalities, are not yet fully developed men. But such a view is also false because it leaves out of account the capacity of rational men for adjustment; it misapplies concepts, and asserts of men and women what is true only of plants and animals. If primitive animism was due to a misleading analogy in consequence of which the savage supposed inanimate objects that moved to be animated by a soul similar to his own, the materialism and determinism of modern times is due to the converse mistake of trying to apply to life and mind categories that are applicable only to the material world. The lesson in this for us is that we must not mix our concepts.

If human life is to be set in order, we must learn to think clearly, and understand the nature, limitations, and liability to illusions, of conceptual thought. A bright woman recently remarked, "I hate psychology." Small wonder, considering the frequency with which the name of science is taken in vain! Yet, just as is her irritation, it remains true that to use an instrument properly it is necessary to know

something about it, and the mental instrument is no exception. Bergson believes that we are constantly trying to do the impossible with the intellect, *i. e.*, the power of conceptual thought. It can do certain things and do them well. Its business is to preside over actions. In this capacity, it is a very efficient instrument, and we have good reason to be satisfied with it. It has acquired certain very useful habits which the practical man need never question. But it so happens that besides the practical interests in life there are also others, such as the philosophic, poetic, artistic. Men and women actually do care not only for "results," but also for truth and beauty. It is legitimate to indulge the poetic imagination, but we must realize that such activity is not scientific thinking. Similarly, when dealing with reality in a practical way, we must not be under the illusion that we are philosophizing, we must not make a metaphysics of a scientific hypothesis.

Bergson's analysis of our mental instrument is peculiarly instructive for the reason that it affords an explanation of certain very old and troublesome metaphysical puzzles with which most thoughtful men sooner or later try a fall. Although reality in both its aspects, as matter and life, is a perpetual flowing, a ceaseless becoming, the average practical intellect regards the material world as a collection of things and

life as a series of states. And for ordinary purposes, such views are justified because they are successful. But they are not the truth, and it is also useful for men to have quiet, reflective, philosophic hours when they perceive the truth. In order to attain to a vision of reality it is necessary to call up our reserves, our unused mental resources, and, even at great effort, to free ourselves temporarily from the habits which the exigencies of action have produced. We then realize that the intellect is unable to think the continuous, whether of time, motion or life, for the reason that its habits are static and its concepts have been molded, not on that which is mobile, but on the unorganized solid. The result is that when science deals with movement, it substitutes for the concrete movement the trajectory of the moving object and seeks to conceive of it as a series of positions, of immobilities put together. This is legitimate for the astronomer, for instance, who is interested in knowing where a particular planet will be at a certain time. Yet it must not be forgotten such calculations do not deal with a real movement, but with a substitution which is regarded as its practical equivalent. Of course, no movement is made up of immobilities. Attempts at such a conception of motion lead at once to the famous puzzles which have troubled the world from Zeno down.

The problem of the flying arrow and its solution is put by Bergson thus: "At every moment," says Zeno, "it is motionless, for it cannot have time to move, that is, to occupy at least two successive positions, unless at least two moments are allowed it. At a given moment, therefore, it is at rest at a given point. Motionless in each point of its course, it is motionless during all the time that it is moving. Yes, if we suppose that the arrow can ever *be* in any point of its course. Yes again, if the arrow which is moving ever coincides with a position, which is motionless. But the arrow never *is* in any point of its course. The most we can say is that it might be there, in this sense, that it passes there and might stop there. It is true that if it did stop there, it would be at rest there, and at this point it is no longer movement that we should have to deal with. The truth is that if the arrow leaves the point A to fall down at the point B, its movement AB is as simple, as indecomposable, as the tension of the bow that shoots it. . . . You fix a point C in the interval passed, and say that at a certain moment the arrow was in C. If it had been there it would have stopped there, and you would no longer have had a flight from A to B, but *two* flights, one from A to C, and the other from C to B, with an interval of rest. A single movement is entirely, by the hypothesis, a movement between

two stops; if there are intermediate stops, it is no longer a single movement. At bottom, the illusion arises from this, that movement, *once effected*, has laid along its course a motionless trajectory on which we can count as many immobilities as we will. From this we conclude that the movement, *while being effected*, lays at each instant beneath it a position with which it coincides. We do not see that the trajectory is created at one stroke, although a certain time is required for it; and that though we can divide at will the trajectory once created, *we cannot divide its creation*, which is an act in progress and not a thing. To suppose that the moving body *is* at a point of its course is to cut the course in two by a snip of the scissors at this point, and to substitute two trajectories for the single trajectory which we were first considering. It is to distinguish two successive acts where, by the hypothesis, there is only one. In short, it is to attribute to the course of the arrow itself everything that can be said of the interval that the arrow has traversed; that is to say, to admit *a priori* the absurdity that the movement coincides with the immobility." So with the other paradoxes of Zeno. "They all consist in applying the movement to the line traversed, and supposing that what is true of the line is true of the movement."

In other words, it is legitimate to substitute

the concept of an immobile line for a movement when we desire to calculate the position of the moving object at a certain time, but to forget what we are doing and to suppose that the movement is, like a line, composed of a series of immobilities is to carry a practical device of the intellect up into the region of metaphysics where it becomes an absurdity. If we did not know that the arrow does move and that Achilles does catch the tortoise, conceptual thought, which has only static forms, would deny the possibility. It necessarily misconceives the real nature of movement.

This is the reason why the philosophers have been mistaken about duration, or real time. It is a flow, a flux; it is continuous; we know what it is by living through it, but, when we try to think it, we substitute for it a succession of simultaneities. For practical purposes, such as the calculations of the astronomer, this is sufficient. But the calculations take no account of the flow. It is enough to know orbits, successive positions, etc. When we try to think of time, we find that we are thinking of it as a line; *i. e.*, in terms of space. But real time is not a line. There is more in motion, in time, and in life than there can be in our concepts of these realities. "*The intellect*," says Bergson, — and he means, of course, the faculty of conceptual thinking, — "*is characterized by a nat-*

ural inability to comprehend life." "Of becoming we perceive only states, of duration only instants; and, even when we speak of duration and of becoming, it is of another thing that we are thinking." "Just as we separate in space, we fix in time. The *intellect is not made to think Evolution*, in the proper sense of the word; that is to say, the continuity of a change that is pure mobility."

Our intellectual life is likened by Bergson to our experience at a moving-picture show. Reality is a flux, matter is a flux, life is a flux; but what our intellect perceives is a collection of forms. The truth is that all forms are changing. "There is no form, since form is immobile, and the reality is movement. What is real is the continual change of form: *form is only a snapshot of a transition.*" The intellect is, therefore, a sort of cinematograph, which takes snapshots of the passing reality, and by stringing these together imitates what is characteristic of becoming, movement, life.

This is not anti-intellectualism. It is a frank acknowledgment of the value of conceptual thinking for practical purposes. But, inasmuch as there is more in life than in our concepts, we are but foolish philosophers when we deny the most certain experiences that life brings because we cannot find them in its concept. We ought not to give up our belief in

the reality of our experience of duration because it is not contained in the bare, abstract concept of time used in mathematical calculations. So with our experience of the novelties that life is always producing. The practical intellect naturally seeks for repetition. If there were no repetition, we would not know what to depend upon, and life would be incalculable. But with this kind of an intellect it is not easy to believe in novelty. It is usually easier to do something new than to prove that it can be done. A certain college boy, interested in athletics, returned to his village and told the neighbors that he had seen pitchers throw curved balls. They laughed him to scorn, saying that he did not know as much as before he went away from home. To them it seemed evident that the ball must go in a straight line after it leaves the pitcher's hand. It is, in fact, easier to throw a ball in a curve than it is to explain why the ball follows the curve. But the point is that in such cases the explanation follows, if it comes at all. We are continually living forward and understanding backward. As Hegel said, the owl of Athene, the goddess of wisdom, flew only in the evening.

The French philosopher is eminently sane and wise, it seems to me, in insisting that, if we wish to know life, we must study it directly. We must deepen insight and develop our in-

stinct into intuition, and not try to apply to it concepts applicable only to the material world. We are to use all our powers, supplementing scientific thinking about the material reality with intuitive knowledge of life. As Prof. James has said, we are to use concepts when they help and drop them when they hinder understanding, and to remember always that they are only thin extracts from perception and insufficient representatives thereof, and that they must never be treated as if they gave a deeper quality of truth. *In other words, in our perceptual experience we have direct and immediate knowledge of continuity, motion, time, change, cause, novelty, and freedom, and it is ridiculous to doubt or deny the validity or worth of these experiences because conceptual thought, which deals with the outsides of things, falls into contradictions when it tries to represent, with the means at its disposal, life's rich and varied content.*

This truth is of great practical significance for religious thinkers and teachers. The preacher has use for knowledge of all kinds; he ought to be acquainted with the leading conceptions of science and to have a first hand acquaintance with scientific methods of investigation; and he ought to be philosopher enough to attain to a mutual interpretation of the truths reached by objective studies and through spirit-

ual insight. But his main business is with life and its interpretation, and for success here he must rely chiefly upon intuition.

A certain young minister read Spencer's "Sociology," and under the influence of this and similar works came to feel that the important things in the world are the great impersonal laws in accordance with which nations and civilizations arise and decline, and that in comparison with truth of this order interest in personalities is trivial. He tried to set forth important scientific generalizations in his sermons, but without much success, and he was surprised and disappointed at the interest aroused by lecturers who dealt with the problems of the personal life. Yet the men and women around him were wiser than he. They were chiefly interested in life, and life is individual and personal while science deals with classes. They were content to leave the discovery of the laws of nature to the men of science and the application of new truths to engineers. They were rightly concerned with the problems of the moral and religious life, and truth comes in this region by insight rather than by the methods successful in the physical laboratory.

Indeed, it is doubtful if one can be expert in both methods at once. Emerson, for instance, bewails his shortcomings as a conceptual thinker. In his journal, under date Jan. 15, 1833, he

says: "Seldom, I suppose, was a more inapt learner of arithmetic, astronomy, geography, political economy, than I am, as I daily find to my cost. My comprehension of a question in technical metaphysics very slow, and in all arts practick. . . . I have no skill." Yet Emerson is the greatest seer in the modern world. His vision of life, of its spiritual processes and laws, is one of the deepest and clearest yet enjoyed by man. In his essay on "Self-reliance," he says, "A man should learn to detect and watch that gleam of light which flashes across his mind from within, more than the luster of the firmament of bards and sages." This was his own method which he employed with marvelous success, and it is for this reason that he is one of the inspirers and helpers of American life. Conceptual thinking discovers Roentgen rays: intuition gives us Emerson's essays.

CHAPTER XI

BERGSON AND ETHICS

Modern readers of Plato and Aristotle are often astonished at the elevation and completeness of their ethical thought. How is it that we have so little to add either to their principles or ideals, we who have steam and electric engines, telephones, telescopes, microscopes, and all the wealth and comfort of a civilization resting upon applied science? To this question, men like Lester F. Ward reply that ethics is not a dynamic factor of civilization, but is essentially static and unprogressive. This is a superficial and unsatisfactory answer. Morality is one of the great interests of life, and, like the life of which it is a part, it is a process, an evolution. The reason for the apparent failure of ethical thinking to make progress in recent times is the very great advance that was made in the classic age. Physical science depends for its development upon apparatus, often elaborate and expensive. Without the microscope or telescope, without our laboratories

and the marvelous instruments of precise measurement they contain, the ancient investigators could not possibly attain the results which are the glory of modern times.

Ethical philosophers, however, require no laboratory. They do need a knowledge of history and biology, and of the laws of personal and social development, which the Greeks did not have, and for which we are now striving. Nevertheless, ethical principles are in large measure the products of insight and expressions of the wisdom of experience. And in these respects we have little if any advantage over the gifted citizens of the Athens of the fourth century before Christ. Aristotle remarks that a man to be competent as an ethical thinker must have received a good moral education. This is profoundly true, and was illustrated in his own case and in that of his great teacher. Men of such native gifts, who enjoyed the education of a Greek gentleman in one of the bloom periods of the race, were exceptionally well fitted for their work as moral philosophers. And their actual success is the chief reason for the apparently unprogressive character of ethical thinking ever since. They carried ethical philosophy as high as it could go until the evolutionary age. Now that we have learned to think in terms of growth, we are keenly alive to the chief defect of Greek ethics, namely, its statical

character. Physical science, dependent as it is upon apparatus, necessarily advanced more slowly, and was outstripped at the very start by investigations which could be carried on without complicated devices which have recently been made possible by a mechanical knowledge and skill then non-existent in the world.

Taken in the large, Plato's conception of the ideal moral life has never been improved upon. For him the good life was the life set in order, no power lacking, but every part of our human endowment present and functioning in its proper place. He conceived of educated human nature as a hierarchy of impulses, reason, assisted by the higher feelings, being in complete control of the more fundamental and animal tendencies. The ideal is that of an organized and graded life. The perfect product he likened to a musical scale. Sometimes it is called "the city within." This is the fundamental ethical idea in the "Republic," the earlier parts of which describe the best means he could think of for effecting that organization of life which was synonymous with the supreme good, and the eighth and ninth books sketching in outline the progressive disorganization, or break-up, of life which is moral ruin. There is one passage in the fourth book in which this great conception is concisely stated: "But in reality justice was such as we were describing, being

concerned, however, not with the outward man, but with the inward, which is the true self and concernment of man: for the just man does not permit the several elements within him to interfere with one another, or any of them to do the work of others,— he *sets in order his own inner life*, and is his own master and his own law, and at peace with himself; and when he has bound together the three principles within him, which may be compared to the higher, lower and middle notes of the scale, *and the intermediate intervals* — when he has bound all these together, and is no longer many, but has *become one entirely temperate and perfectly adjusted nature*, then he proceeds to act, if he has to act, whether in a matter of property, or in the treatment of the body, or in some affair of politics or private business; *always thinking and calling that which preserves and co-operates with this harmonious condition, just and good action*, and the knowledge which presides over it, wisdom, and that which at any time impairs this condition, he will call unjust action, and the opinion which presides over it ignorance.” 443 E.

Notice the parenthetic and apparently unimportant words, “the intermediate intervals.” Plato knows that he is not giving a complete account of human nature, but a broadly schematic statement. He makes a division of the parts of our natural endowment which, in a general

way, conforms to the facts. The highest in man he calls the rational part of the soul, by which he means not only the intelligence that understands, but also that which makes him desire to understand, that love of the true and the beautiful, that divine Eros which is capable of the development described in the "Symposium." The nobler emotions he groups together and calls "spirit." It is that manly part which resists aggression, which is righteously indignant at injustice, which makes a man a brave soldier for the ideal, and which is closely related to our divinest powers. The third part of the soul is the appetitive group of impulses, the bodily appetites and the desire for wealth. These are bad only when they are insubordinate and throw the whole nature into disorder. Just as the bad citizen is, in Platonic phrase, the "inorganic" man, the man who is not performing his proper function in the social organization, but is like a foreign particle lodged in it, so impulses are bad only when they have not their peculiar and appropriate place in the organic life. Plato does not give a list of all the powers or parts of human nature, but he has stated with perfect clearness what we are to do with them. *The moral problem of the ages* is set forth in that passage in the fourth book of the "Republic" with entire adequacy and precision. *Life is to be organized to the end that*

it may be enjoyed abundantly. The many various interests forming part of our complex hereditary endowment are to be conciliated, not from enmity to any, but from regard to all. A life that is in disorder is necessarily meager and poor. In the organized and well-disciplined nature, every function is exercised so far as is consistent with the welfare of the whole.

We are to-day in *urgent need of a revised conception of goodness.* The ideal that is presented in many pulpits and ethical works is too ascetic, too suggestive of repression rather than of fullness of life. This is one result of the too exclusive pre-occupation of moral teachers with the New Testament. In some respects, the teaching of Jesus and Paul gives a needed supplement to Greek ethics. The doctrine that evil is to be overcome by good, that we are to live ceaselessly in the spirit of goodwill, that he who loves enters into the divine order, the spirit of Jesus in his treatment of social outcasts, of the despised and rejected of men,—this is the purest gold. Higher teaching is not conceivable. But there is another side to New Testament ethics which is less admirable. In the letter to the Romans, it is emphasized and repeated,—“Mortify the deeds of the flesh, make war against the bodily desires and impulses, since they are the enemy of the spiritual or real nature. Crucify the natural man, kill one side

of your nature, and let the other live in mystic union with the divine spirit." Such is the spirit of this teaching, and it does not and ought not to appeal to our young people whose ideal is of a full rather than of a mutilated life. The message of the moral teacher should be—"Discipline your life and organize it in order that it may be as rich and abundant as possible. Moral principles are essentially the principles of complete living." He should say to the young and ardent souls who crave expression, who long to find an outlet for the powers they feel pressing within, "You want to live to the utmost, very well; that is what you ought to desire. What I am seeking to show you is that the condition of success in your undertaking is organization, not anarchy. An insubordinate impulse may deprive you of many of the richest and sweetest experiences to which you rightly look forward."

Of course, there are cases in which the Pauline admonition to destroy impulses is wiser than the Platonic advice to organize them. If one is so badly born that certain animal impulses are unduly strong, if morbid desires threaten destruction, then one must fight for one's life. If thy right eye offend thee, pluck it out and cast it from thee, for it is profitable for thee that one of thy members should perish, and not that thy whole body should be cast into hell. Better

mutilated than having eyes to fall into the hell of disorganization and moral ruin. But such advice is needed only in exceptional cases. The unhappy creatures whose whole career must be a struggle with devils are fortunately few. Of course, they need to be born again who are too badly born the first time, but the majority are wholesome people whose life-long task is simply that of setting in order their inner and outer lives. This conception of the good life as a construction, as a product of organization, is in entire harmony with the present view that civilization is a constructive activity in which all men should have a conscious part. If it could be put in the forefront of the ethical teaching of the present, and concretely presented; if goodness could be shown to be the amplest expression of human nature, and morality the essential condition of the complete realization of self; if Christian ethics were supplemented by Platonic ethics, our whole people would in time come to cherish a nobler ideal, one more natural, social and human, and an immeasurable gain in real happiness would result.

The great and, so far as we can see, the only defect in this conception is that it is too static. It needs to be revised in the light of the doctrine of evolution. We now realize, what the ancient Greeks and early Christians did not know, that

the moral life is not like a house that is builded once for all and that henceforth remains unchanged. Life is a process and must be conceived in terms of growth. Although moral progress can be effected only by increasing organization, the ideal is not that of a mechanism, of a rigid and crystal-like structure, but a plastic type that can keep up its adjustment to a changing environment. In other words, the good is that which conduces to development, which furthers personal and social evolution. The bad is that which arrests or hinders the onward movement.

These two great fundamental ideas of organization and evolution round out ethical philosophy, and form a basis on which individuals and nations can safely build their lives. Without the organization which habits, customs and traditions afford, evolution is not possible. It is necessary early in life to make elementary moral principles automatic and a matter of course. They must be built into the structure of the nervous system, so that we shall speak truth and be honest as the bees make honey. When good morals, gentle manners and correct speech have become habitual and natural, conscious thought is set free for new and higher acquisitions. Only when the musician is master of technique can he be concerned solely with his mood and its expression. The part of life that through

habit has become organically moral is like the heart of a tree, where the living protoplasm used to be; it is the strength and support of the life that is building new structures. So our stability depends on the organization of inner life through habit and loyalty to venerable tradition, to principles which the experience of the ages has shown to be livable.

On the other hand, we must remain plastic, able to reshape our traditions, to alter our customs, and to revise our ideas, for if anarchy lies in one direction, we must also avoid the opposite danger of the fixity, the rigidity which means death. "New times demand new measures and new men," said Lowell. To be exact, we may say that new times demand new measures, new thoughts, and new deeds, and if men have lost their plasticity and cannot be "renewed in the spirit of their minds," they are cast aside and their places are taken by new men.

Bergson has not written upon ethics, but it is easy to see the significance of his philosophy for ethical thought and the moral life. He is a thorough-going evolutionist, but evolution means for him something more than a redistribution of matter and motion, than a rearrangement of a fixed number of atoms and a transformation of a definite amount of energy. It involves the production of novelties and is of the nature of an adventure. Since the past is

ever swelling with the addition of the present, it follows that history does not repeat itself and that life is constantly confronted by new situations. The adjustments it has to make in consequence are not passive, but are of the nature of solutions of a problem. Evolution is therefore creative, which in a block-universe, a cosmic mechanism, it could not possibly be.

The reader of Bergson cannot fail to see that, for his author, *automatism is the enemy* that ever threatens the life force. This point is urged in many vivid pages. "Consciousness," he says, "is synonymous with invention and with freedom. Now, in the animal, invention is never anything but a variation on the theme of routine. Shut up in the habits of the species, it succeeds, no doubt, in enlarging them by its individual initiative; but it escapes automatism only for an instant, for just the time to create a new automatism. The gates of its prison close as soon as they are opened; by pulling at its chain it succeeds only in stretching it. With man consciousness breaks the chain. In man, and in man alone, it sets itself free. The whole history of life until man has been that of the effort of consciousness to raise matter, and of the more or less complete overwhelming of consciousness by the matter which has fallen back on it. The enterprise was paradoxical, if, indeed, we may speak here otherwise than by

metaphor of enterprise and effort. It was to create with matter, which is necessity itself, an instrument of freedom, to make a machine which should triumph over mechanism, and to use the mechanism of nature to pass through the meshes of the net which this very determinism had spread. But everywhere except in man, consciousness has let itself be caught in the net whose meshes it tried to pass through: it has remained *the captive of the mechanisms it has set up*. Automatism, which it tries to draw in the direction of freedom, winds about it and drags it down." (Italics mine.) Life has, therefore, to its credit, some great successes and many failures. Vegetable and animal life is for the part sunk in automatism. The various species which have been successively built are achievements, but when they become fixed they appear in a certain sense as failures, "what was to have been a thoroughfare having become a terminus."

Even man must continually guard against the danger that has overtaken all else that lives. "It is what each of us may experience in himself. Our freedom, in the very movements by which it is affirmed, creates the growing habits that will stifle it if it fails to renew itself by a constant effort: it is dogged by automatism. The most living thought becomes frigid in the formula that expresses it. The word turns

against the idea. The letter kills the spirit. And our most ardent enthusiasm, as soon as it is externalized in action, is so naturally congealed into the cold calculation of interest or vanity, the one takes so easily the shape of the other, that we might confuse them together, doubt our own sincerity, deny goodness and love, if we did not know that the dead retain for a time the features of the living."

In "Laughter: An Essay on the Meaning of the Comic," a translation of "Le Rire," Bergson himself gives some intimation of the bearing of his world-view upon ethical thought. Laughter he regards as a means society uses to correct the dangerous unsocial tendency to mechanical inelasticity which constantly threatens its members. "*What life and society require of each of us is a constantly alert attention* that discerns the outlines of the present situation, together with a certain elasticity of mind and body to enable us to adapt ourselves in consequence. *Tension and elasticity* are two forces, mutually complementary, which life brings into play. If these two forces are lacking in the body to any considerable extent, we have sickness and infirmity and accidents of every kind. If they are lacking in the mind, we find every degree of mental deficiency, every variety of insanity. Finally, if they are lacking in the character, we have cases of the *gravest in-*

adaptability to social life, which are the sources of misery and at times the causes of crime. Once these elements of inferiority are removed — and they tend to eliminate themselves in what has been called the struggle for life — the person can live, and that in common with other persons. But society asks for something more; it is not satisfied with simply living, it insists on living well. What it now has to dread is that each one of us, content with paying attention to what affects the essentials of life, will, so far as the rest is concerned, give way to the easy automatism of acquired habits. Another thing it must fear is that the members of whom it is made up, instead of aiming after an increasingly delicate adjustment of wills which will fit more and more perfectly into one another, will confine themselves to respecting simply the fundamental conditions of this adjustment: a cut-and-dried agreement among the persons will not satisfy it, it insists on a constant striving after reciprocal adaptation. Society will therefore be *suspicious of all inelasticity of character*, of mind and even of body, because it is the possible sign of a slumbering activity as well as of an *activity with separatist tendencies*, that inclines to swerve from the common center round which society gravitates; in short, because it is the sign of an eccentricity. And yet, society cannot intervene at this stage by material repression,

since it is not affected in a material fashion. It is confronted with something that makes it uneasy, but only as a symptom — scarcely a threat, at the very most a gesture. Laughter must be something of this kind, a sort of social gesture. By the fear which it inspires, it restrains eccentricity, keeps constantly awake and in mutual contact certain activities of a secondary order which might retire into their shell and go to sleep, and in short, softens down whatever the surface of the social body may retain of mechanical inelasticity." (*Italics mine.*)

It is to be noted that the author is here speaking of the laughter directed at the comic, not of all laughter, such as that which is the expression of childish exuberance and pure joy. And since, as he says, "there is no essential difference between the social ideal and the moral," laughter has both a social and moral meaning and import. It is not moral in the sense that it is kind, for when we laugh at the absurdities of others, there is "always an unavowed intention to humiliate, and consequently to correct." When one becomes a man of one idea, when his habits become so fixed that he is more and more like a mechanism, a mechanical puppet, when he loses his pliability and consequently his social adaptability, he is laughed at. This may be and often is good for him, but not very lovely in those who thus subject him to humiliation and

intimidation. Laughter at the comic is not kind-hearted. Bergson remarks that "nature has implanted in the best of men, a spark of spitefulness, or, at all events, of mischief. Perhaps we had better not investigate this point too closely, for we should not find anything very flattering to ourselves." Nevertheless, "here, as elsewhere, nature has utilized evil with a view to good."

Bergson's meaning is very clear. It is that, ideally, a man is alert, always meeting new situations with appropriate adjustments of mind, heart and action. This is to be intensely, completely alive. It is to be present-minded men, rather than absent-minded, for the latter adapt themselves to "a past and therefore imaginary situation, when they ought to be shaping their conduct in accordance with the reality which is present." Moreover, such inattention to self involves inattention to others and this means unsociability and moral failure. The more a man tends to become a set of fixed reactions, a series of repetitions, the more he resembles a mechanism, a thing, and the less alive he is.

The ideal moral life has, as we have shown, two aspects. It is an organization of the multitude of impulses, tendencies, needs, desires and capacities which each human being receives as a legacy from those through whom his life has come. Out of this chaos, he must create order,

and the individual must so build that his structure will fit into the social order. There must be a scale of values and a corresponding hierarchical organization of instinctive tendencies, so that the highest is in control and each down to the lowest fills its proper place. This is the elementary lesson which a great part of the world has still to learn. But it is only the beginning. *First order, then progress.* Without order, all is anarchy: without progress, the rigid structures fall out of relation with the changing of environment, and death results from lack of plasticity. All the thoughts, the habits and social institutions which life creates to meet certain situations must remain capable of the revision demanded by new situations. Since the moral life is a life, it is a process, an evolution, and our conceptions of goodness, to be adequate, must be dynamic. It is therefore inevitable that the ethical philosophy of the Greeks, so noble and satisfying in part, should be remolded in the light of the philosophy of evolution. All modern thinkers are evolutionists, but Bergson is peculiar in the stress he lays upon the creative aspects of the life process. *For him the moral ideal is to keep life alert, free, creative,* that is to say, living. The pilgrim in his progress must guard against the monster Automatism, whose prisons are full and who seeks to catch him unawares. He must

“put on the new man,” not merely once, as the Apostle Paul demands, but unceasingly. He must not dream of finalities to be attained, for “spirituality is a progress to ever new creations,” and the spiritual life an unending adventure.

CHAPTER XII

BERGSON AND PRAGMATISM

What is the relation of Bergson to his great predecessors, to Plato and Aristotle, to Descartes, Spinoza and Leibnitz, to Kant and Spencer, and to the most eminent representatives of modern science? To this question, he has himself given an answer, marvelous for the lucidity and the precision with which the greater issues in the history of thought are set forth. He has, however, explained merely the logical, not the historical and genetic, relation of his general view to previous philosophical constructions. How much does he owe to the suggestions of others, and what precisely has he contributed that is absolutely new? This is an interesting question, the discussion of which must be deferred as it would take us too far afield. Those who care to pursue the subject for themselves will find some interesting suggestions in an article by Prof. A. O. Lovejoy, on "Schopenhauer as an Evolutionist," and in an essay by René Berthelot in his "Evolutionnisme et Platonisme," entitled "Apropos de l'idée de vie chez Guyau,

chez Nietzsche, et chez Bergson." According to the former, some of the main features of Bergson's "romantic evolutionism" or "generalized vitalism" was anticipated by Schopenhauer. He states his conclusion as follows: "Like Schopenhauer, M. Bergson adopts, as the biological theory most congenial to his metaphysics of the *poussée vitale*, a combination of the doctrines of orthogenesis and mutation. The later writer may or may not have been influenced by the earlier one, but there can be no doubt that in Schopenhauer we find the first emphatic affirmation of the three conceptions most characteristic of the biological philosophy of 'L'Évolution Créatrice.'"

Berthelot, seeking the origin of Bergsonism, finds that it is in part due to the influence of Ravaisson, who had got his metaphysics from Schelling. It seems that Ravaisson knew the German philosopher at Munich and had accepted from him "the doctrine according to which the principle of all things is a free, spiritual activity which is both love and æsthetic activity, while matter and logical and mathematical ideas have only an imperfect reality."

Whatever may be the truth about this, no one will deny that Bergson is one of the most original of thinkers. All of us, perhaps, have intellectual debts of which we are unaware. No one can make a list of all the fruitful suggestions

and inspiring stimuli his mind has received. The jealousy about priority of statement is one of the most amusing and at the same time one of the most pitiful features of the academic and scholarly life of our time. It is discreditable to be so concerned about receiving credit for contributions to knowledge. Such foibles are of no interest to laymen, who look on these disputes of the learned with wonder. The main question the world asks about Bergson's philosophy is, Is it true, and if true, what does it signify for our life?

There is a special reason for a consideration of Bergson's relation to pragmatism. This so-called philosophy is attracting the attention of many people, some of whom are taking stock in it without any very careful examination of its claims. For it is with philosophies and religions and theories of health and disease as it is with less important and more material matters, such as mining ventures, industrial stocks, state and municipal bonds. There is an astounding readiness on the part of the public to invest in what they have not investigated. A Scotchman met his parson, who said, "Sanday, I have not seen you at the kirk lately." "No," he replied, "I have been tinkering with my soul myself." Something is to be said for this self-reliant and adventurous spirit. Still, systems of thought, like financial enterprises, often go

into bankruptcy, and the prudent will not dispense with expert advice. And it is always well to consider the question of solvency beforehand. The logicians, who criticise for us the philosophies upon which we think of building our hopes, perform a service similar to that of the bank examiners. At the beginning of his discussion of the relation of absolute idealism and religion, Prof. R. B. Perry remarks that "Idealism undertakes to substantiate the extreme claims of faith,—the creation of matter by spirit, the indestructible significance of every human person, and the unlimited supremacy of goodness. The terms of a devotional mysticism — Spirit, Perfection, Eternity, Infinity — appear in the very letter of its discourse. Nor has this promise of good tidings been unheeded. Idealism has acquired prestige and a position of authority. While it has little if any direct access to the popular mind, it is resorted to habitually by the middle men of enlightenment, by clergymen, litterateurs, lecturers, and teachers. Hence it comes about that many an honest man has invested all his hopes of salvation in the adventure. And this is my apology for undertaking to audit its accounts; the question of its solvency being of no small human importance." ("Present Philosophical Tendencies," p. 164.)

The present situation cannot be better stated than in the words of Prof. J. B. Pratt: "Some-

how or other pragmatism has got itself pretty generally associated in the public mind with religion. It seems to be the common impression that at this critical moment in the warfare of religion with agnosticism the pragmatists have come to the help of the Lord against the mighty, and that, thanks to their new-forged and new-fashioned weapons, victory is secure. It is this belief, I suppose, which more than anything else explains the wide and growing popularity of the new philosophy. For, after all, no other philosophical problems have so great and so permanent a hold upon the interests of the people at large as have those that deal with religion. For this very reason, moreover, no philosophical ideas deserve and require more careful scrutiny than those which affect the religious views of the community. Since, therefore, there is so considerable a tendency to-day to throw one's cap in air and shout, 'The sword of the Lord and of Pragmatism!' it behooves all those who have the interests of religion at heart to look carefully into the question whence pragmatism has gained its religious reputation and how well it deserves it. What is the nature and the temper of this newly patented pragmatic sword, and is it so sure a defense that we may with safety throw aside for it our older weapons? Just what is it that pragmatism proves and how does it prove it? If we trust our religious be-

liefs to its defense, just what surety have we that they will be defended and that when we get them back again they will still be recognizable? When the question is put in this way, the controversy over the meaning and validity of pragmatism ceases to be a merely academic matter, and is seen to be fraught with truly human and living interest." ("What is Pragmatism?" pp., 175, 176.)

The amateur in philosophy, hearing of pragmatism, might suppose it to be something definite, something which, after reading a book or two about it, he could easily understand. Such a supposition is most natural when we consider that the whole movement was started by an article entitled, "How to Make Our Ideas Clear," which appeared in the *Popular Science Monthly* for January, 1878. The article attracted no attention until, in an address at the University of California in 1898, Prof. Wm. James "brought it forward and made a special application of it to religion." Since then, it has been one of the chief subjects of controversy in the philosophical world. Books have been written and the technical journals have abounded in articles by the exponents and defenders of the new doctrine. This controversy may easily be misinterpreted, and accepted as confirmation of the impression that philosophy is after all nothing but a war of words. The fact is that dis-

cussion is the philosopher's laboratory, and all this argumentation is a form of co-operation. If the contents of our minds are not to be tangled masses of inconsistencies, there must be acute criticism, and the implications and logical outcome of every system proposed for our acceptance must be made clear. In this work, it is the consistent and thorough-going thinkers who are the most helpful. Practical life is possible only through the conciliation of many interests and through numerous compromises, but when it is a question of understanding the meaning of ideas, clearness and logical thoroughness are essential.

We speak of the irony of history. It was never better illustrated than in the case of pragmatism. Announced as a method of making our ideas clear, it has made nothing clear, least of all its own nature. The one constant note in nearly all the expositions of pragmatism is the note of complaint of being misunderstood. The trained philosophers of Europe and America, men whose business in life is to understand such things, are accused of incapacity and willful blindness. One of the leading American philosophers finally closed a discussion with an English pragmatist, saying that the pragmatists have so changed the meaning of words that a mutual understanding is hopeless. Worse still, the defenders of the new method do not always

understand one another. The founder of pragmatism, Mr. Charles Peirce, gave a course of lectures on the subject at Harvard University, which his auditors evidently failed in large part to comprehend. He also gave a course of lectures on the same theme at the Lowell Institute, which Prof. James himself confesses that he did not understand, saying that in them were "flashes of brilliant light relieved against Cimmerian darkness. None of us, I fancy, understood *all* that he said." In this connection, it is also interesting to note that Mr. Peirce was so dissatisfied with what Prof. James and others made of his principle that he finally decided to give up the use of the word pragmatism to them, while he calls his own view pragmaticism.

The original idea seemed simple enough. To have a clear thought of an object, said Mr. Peirce, it is necessary and only necessary, to know what to do with or about it, what to expect from it and what response to make to it. If it is a stick of dynamite that is in question, or a tiger, or a persuasive agent of an investment company, your knowledge is adequate if you know what effects the object is likely to produce and how to act so as to guard your own interests. Our ideas are thus rules of action, and their test is our success. There is some truth in this view, but it is fragmentary and partial. We owe a great deal to Prof. Dewey, who has shown what it leads to if con-

sistently and exclusively held. He says that ideas are plans of action. Now of such plans, we may say that they are good or bad according as they do or do not work. It is irrelevant to speak of them as true or false. Prof. Dewey and those who are equally clear and logical continue to use the word truth, but they refuse to admit that it has any other meaning than that of effective working. The vast majority of thinking men know perfectly well that they have some significant ideas which are not plans of actions, but are judgments of fact and existence. Thus if I think that J is in Berlin and he is really there, my judgment is true. I may not intend to do anything about it, yet the fact may be interesting just as I am interested in knowing that almost half of the moon's surface is invisible from the earth. One of the great goods of life is in learning truths, not merely that we may act more wisely, but for the pure pleasure of learning and knowing. To the radical pragmatists, this is most perverse. Says Prof. Dewey: "The appropriate subject matter of awareness is not reality at large. . . . Its proper and legitimate object is that relationship of organism and environment in which functioning is most amply and effectively attained; or by which, in case of obstruction and consequent needed experimentation, its later eventual free course is most facilitated. As for the other reality, metaphysical reality at large,

it may, so far as awareness is concerned, go to its own place."

That is, the great interest of men in all history in such questions as the philosophers and religious people have asked and sought to answer is utterly vain. The existence of God, the nature of the world and of human nature,—it is idle to discuss such themes except so far as they conduce to a better functioning of the human organism. This condemnation of the human race for its intellectual and religious proclivities is not merely general, but falls hardest on its finest representatives. For the finest men and women who have lived on the planet have shared the spirit of Plato and Aristotle, and have believed with them that the highest of human joys is to ascend to the summits of thought and approximate the ideal of "the spectator of all time and existence." Their attitude is that expressed in Francis Bacon's famous words, "Howsoever these things are in men's depraved judgments and affections, yet truth, which only doth judge itself, teacheth that the inquiry of truth, which is the love-making or wooing of it; the knowledge of truth, which is the presence of it; and the belief of truth, which is the enjoying of it, is the sovereign good of human nature."

One of the terms by which the Germans designate philosophy is *Lebensweisheit*. The controversy over pragmatism illustrates the differ-

ence in value for life of the philosophy which takes a single point of view and keeps to it, and the other type of philosophy which surveys human experience and the world from all available positions. Dewey shows what we come to when we take the biological point of view and resolutely refuse to consider any aspects of reality which cannot be seen from that position. It is very useful, *e. g.*, to consider man in his place in nature, affected, like his lowly kindred, by the conditions which we know to have so great an influence on their life. For instance, we are beginning to realize the importance of selection to the human race. Is war under modern conditions a process of destroying the biologically best, leaving the inferior to breed? Are our charities and philanthropies, our economic and social conditions, producing a differential fertility in favor of the weaklings and incompetents? As society is so extensively interfering with the processes of natural selection, must it not, to prevent organic deterioration, interfere still more? We cannot, to be sure, answer these questions at present, but it means much that we know enough to ask them. It is, therefore, not only important but absolutely necessary that we survey the world from the biological point of view. But, for other purposes, it is equally necessary that we occupy different standpoints. For instance, the orthopedic surgeon is a very

useful member of society, and he must consider the human body as a machine. It is, of course, much more; still, it is that. To understand it as a mechanism, is to be a man of science; to insist that, because the bones are levers moved by muscles stimulated to action by nerve currents which are the result of chemical reactions, we are only conscious automata, is to be an *a priori* philosopher and a very crude one at that. It is to do what Prof. Dewey and the radical pragmatists do, namely, deny all values which they cannot see from the place where they stand. If we want to understand a doctrine perfectly, we shall follow men like this who hold it with an absolute, if narrow, consistency. But if we wish *Lebensweisheit*, the philosophy which is the wisdom of life, we shall survey all objects of all thought from all possible positions. We shall see how life looks from the materialistic, biological, psychological, moral and religious point of view, and do our best to make a composite picture of the whole. We shall fail of perfect success, but our effort at least is in the right direction and makes for sanity and against the fanaticism of devotion to partial views. There will be inconsistencies in our mental constructions, but this is because we have not yet learned to harmonize in thought the many tendencies which exist in the concrete world. And the beginner in philosophy would do well to pass the

following resolution:—"I will never deny facts on the ground of a theory." Having done so, he will find a delight in reading the books of William James; for that great man, with a beautiful candor, as absolute as that of John Stuart Mill, frankly admitted the valid criticisms offered against his original theory of pragmatism, and made so many concessions that practically nothing was left of it at last except the part of it that argument can never reach, namely, a certain temper of mind, which he describes as "The attitude of looking away from first things, principles, categories, supposed necessities; and of looking forward towards last things, fruits, consequences, facts."

This, which has been called "the laboratory habit of mind," is, of course, old. "By their fruits ye shall know them," is a maxim that comes to us from old time. And Plato has explained at great length that the man who really knows an implement is, not the painter who reproduces its likeness in his picture, nor even the artisan who made it, but the man who knows how to use it. But, besides being a method, pragmatism is for Professor James also (2) a theory of truth and (3) a theory concerning the structure of the universe, the theory that reality is still in the making, that the universe, instead of being complete, is unfinished and growing in all sorts of places, the processes of

our human consciousness having a creative part.

Pragmatism is first of all a method of distinguishing really significant propositions from those without meaning. Of the value of this method Professor James has the highest opinion. "It is astonishing," he says, "to see how many philosophical disputes collapse into insignificance the moment you subject them to this simple test of tracing a concrete consequence." This is a pleasing prospect. If, by a simple and easy method, it can be shown that many ancient and difficult questions are unmeaning for the reason that it makes no difference to us whether they are true or not, we are obviously dispensed from the labor of inquiring into their truth. Unfortunately, however, the proposed method is not only no royal road to a solution or disposal of philosophic problems, but it is no road at all, for the reason that the method is not one but two, and when these two have been disentangled, it is clear that there is no help in either.

Peirce's use of the pragmatic principle was clear and unambiguous. The meaning of an object, he says, consists in the effects we may expect from it, in the practical reactions it demands, in the responses that are appropriate when we come into its presence or have to do with it. When, however, this test is used to determine the meaning of judgments, the case is

less simple. It is not enough to state that the meaning of a judgment consists in its consequences, for, as the logicians have been quick to point out, the cases in which the consequences come whether the judgment be believed or not must be distinguished from those in which the consequences come only when the judgment is believed to be true. Thus, the statement that cyanide of potassium is a poison that causes instant death is one that holds good regardless of the opinions of the person who puts it to the proof. Not even a Christian Scientist could avoid the consequences. On the other hand, optimistic and pessimistic views of life are practically resultless when they are regarded in an idle, speculative way. But when they are seriously believed in they produce the most momentous consequences, profoundly affecting the emotional and practical life. Regard men as merely half-tamed gorillas, moved principally by greed and fear, and you get results, some of which will appear to justify your theory. Believe, on the other hand, that men are the sons of God, that they will respond to the appeal of reason and love, think of the universe as a divine order in which the only appropriate life is one that is controlled by the highest human ideals — live by this as a working theory, and you will find it full of significance. It will have a meaning for you which it would not have if

you did not believe it. The consequences of a proposition and the consequences of belief in a proposition are, therefore, wholly different things, but Professor James, in his application of the pragmatic test, has not kept them apart. So long as the ambiguity is not noted, the method seems very effective. It is easy for a lively pragmatist writer to ignore the consequences of belief and show that the philosophic and religious theories which he does not like are truly ridiculous. Looked at in an unsympathetic way, the most venerable ideas do indeed appear insignificant. To those who have no affection for them and who do not accept them as true, they seem irrelevant, they make no difference. Since the facts are what they are and these theories alter reality not one whit, they are pragmatically condemned. On the other hand, if belief is taken into consideration, it is obvious that no idea that men have ever cherished or taken seriously to heart is without significance, and the method cannot be used to distinguish propositions that have meaning from those that have not. We shall not know what pragmatism as a method is until its representatives tell us which of these two theories of meaning they adopt. We may join with Professor Lovejoy in calling for an election between them, and agree with him that probably neither choice will be found welcome. "For all the charm and im-

pressiveness of the theory arises out of the confusion of its alternative interpretations. It gets its appearance of novelty and of practical serviceableness in the settlement of controversies from its one meaning; and it gets its plausibility entirely from the other. But (when the distinction is made) in the sense in which the theory might be logically functional, it seems hardly likely to be plausible; and in the sense in which it is plausible, it appears destitute of any applicability or function in the distinguishing of real from meaningless issues." That is, if pragmatism chooses the first theory of meaning and ascribes importance and significance only to those propositions which enable us to predict events that will come even if these propositions are not believed, the theory will not be of much use, since nothing can pass this test except such scientific laws as those through which we can foretell eclipses, practically all the working hypotheses men live by, fight over and die for being reduced to nonsense, for the reason that they have no results at all unless they are believed in. And if the other choice is made, again we are not helped, since all views of life are full of meaning to those who take them seriously and believe them true.

So much, then, for the first pragmatism, the method. It may be noted in passing that the way in which it has been disposed of illustrates

the value of that criticism which consists in the making of distinctions. Our thought is often a blur because we are trying to think together things which do not belong together, and the greatest service that can be rendered in such cases is to have these confused components of our ideas distinguished and set apart. The task that next confronts us in the consideration of the pragmatic notion of truth is the same in kind, though far more difficult. In Bacon's famous essay we read,—“ ‘What is truth?’ cried jesting Pilate, and waited not for an answer.” One bright woman, who has listened to some of the recent discussions which pragmatism has started about the nature of truth, says she now knows why Pilate did not wait. It should be remembered, however, that it is not the philosopher's fault that the problems he deals with are hard to answer. He can be held responsible only for doing his best. Now it is over this question of the nature of truth that the battle rages, for here is the storm center of interest, and it is chiefly in the discussion of this subject that the pragmatists complain of being misunderstood. And, while all men are concerned, the outcome of the debate is of vital importance for those who as students of science and philosophy and as ministers of religion conceive that a large part of their business is the learning and teaching of truth. Such learning and

teaching is not merely our privilege; it is our life. It may be frankly admitted that Truth, Truth with a capital T, is an idol of our tribe. The conviction that truth is, that it is discoverable, that to learn, teach and apply it is one of the noblest and most salutary things a human being can do, is one of the assumptions on which our lives rest. This idea fills us with enthusiasm, inspires our studies and professional work, and whatever threatens it threatens the heart of our higher life. If, as the pragmatists say, truth is no longer a distinct category, but merely a form of the good, if ideas are merely useful or expedient rather than true, it is obvious that much of our enthusiasm has been foolish and we must change our tone.

Of course, when the pragmatists attempt to establish a new view of the nature of truth, it does not occur to us that they mean to deny its existence. Nevertheless, they have a way of speaking about it that alarms our instincts.

The situation is as follows: The ordinary, intellectualist view is that truth is a matter of agreement of our ideas with an objective order, that this order is something to which our thoughts must conform, if they are to be true. That is, certain things have happened, and certain processes go on, events have a certain sequence; thus, we say, Cæsar lived, the angle of incidence is equal to the angle of reflection,

Henry is in Berlin, the date of Deuteronomy is about 620 B. C. These things being so, if I think they are so my thought is true. It is hard to see how anything could be simpler. But the pragmatists make difficulties and offer a view they consider to be more concrete, in the exposition of which they fill us with uneasiness by seeming to give aid and comfort to those who have no intellectual conscience and who play fast and loose with truth. We have observed the progress that has been made by men like Faraday and Darwin, constructing theory after theory, and then ruthlessly crushing in their beautiful promise all these intellectual constructions that do not agree with or reflect the processes they are meant to explain. And we see that the lack of this intellectual piety in many people, their preference for ideas that are merely pleasing or that legitimate their prejudices, and their failure to acknowledge their obligation to find out what has been and is and to accept what is proved to be true regardless of its disturbing effect on their traditional beliefs, has filled the world with war and is still the cause of endless strife and mental confusion.

It is, therefore, naturally disconcerting to read in the lectures of Professor James that "Truth *happens* to an idea. It *becomes* true, is *made* true by events. It verily *is* in fact an event, a process: the process namely of veri-

fying itself, its *verifi-cation*." . . . Truth is *made*, just as health, wealth and strength are made, in the course of experience. . . . This function of agreeable leading is what we mean by an idea's verification. The truth of a state of mind means this function of *a leading that is worth while*. And when much is said about truth being what gives "the maximum possible sum of satisfactions," about the true being "*only the expedient in our way of thinking*," in spite of the fact that the pragmatist acknowledges the coercions of the world of sense and of abstract relations and feels as much as anyone "the immense pressure of objective control under which our minds perform their operations," we are not satisfied, since we cannot help feeling not only that it is the incidental features of truth which have been emphasized, but also that all this will tend to strengthen that mere willfulness in thinking of which there is already too much in the world, and that it will benefit none but those who are ever looking for some justification of their determination to hold to cherished beliefs in the absence of evidence and even in the face of contrary evidence.

When, impelled by such interests, we subject the pragmatist theory of truth to close scrutiny in order to determine its meaning and probability, we find, as in the case of pragmatism regarded as a method, a radical ambiguity.

There are many passages in Professor James' book that, taken by themselves, would indicate that he maintains the view that truth is wholly within human experience, a view which he disclaims as absurd. Yet these misleading passages are there, and the fact that they stand side by side with other statements which teach a different doctrine has confused the readers of this brilliant and fascinating book. This has come out clearly in recent discussions, and since my purpose is to make plain how pragmatism has gradually been forced practically to give up its case, I propose to give a resumé of the course of these discussions touching this main point. Herbert Spencer somewhere complains that he found Plato uninteresting reading, and objects particularly to the dialogue form in which his philosophy is cast. But, as I have said, philosophy is essentially a dialogue. It is only through discussion that we become clear as to our own intent or can know the mind of others. The old Greek philosophers wished to clear up the subject as they went along, and not pass over any points that were obscure or that failed to secure the assent of both parties. The method to-day is to write a book and then reply to the critics in the technical journals. And even in the book the views of opponents are discussed, so that the dialogue is preserved in the substance, if not in form.

It was a great day in Athens when Socrates could be pitted against some famous philosopher, and it is a great thing for us that this question has been discussed by able men on both sides. I am sure there is no better way to clarify the situation than to extract from the *Journal of Philosophy, Psychology and Scientific Methods* the following passages from a controversy between Professor James and the clearest and most brilliant of his opponents, Prof. J. B. Pratt, of Williams College.

To this conversation of Socrates and Protagoras let us now attend. Professor Pratt first calls attention to the fact that, while pragmatism identifies the truth of an idea with the process of its verification, it is also spoken of as being verifiability, which is a very different thing; and he properly insists that the issue between pragmatism and intellectualism cannot be perfectly clear-cut if these two views are confused. The latter conception of truth as verifiability is not pragmatic, for pragmatism says truth is a process, an event, and "verifiability is not a process, is not included within anyone's experience, but is a general condition or set of conditions which transcends every single finite experience. It is not a 'felt leading,' it is not a 'form of the good,' nor a 'satisfactory working,' nor any other kind of experience or experience-process. It is a totality of relations which

are not within any finite experience. It is a present condition of the idea, not something that happens to it. It is not 'made'; it is already there. Verification is one thing; verifiability is another." The pragmatist must choose, for it is as impossible to identify truth with both "as it is to be both a pragmatist and an intellectualist at the same time. The pragmatist cannot hold them both; he cannot say truth is altogether within experience and truth transcends experience." . . . "That being the case, there can be no doubt, after all, as to the fundamental pragmatic view of truth. Truth for the pragmatist does not mean verifiability, it means the process of verification. It is wholly within experience."

This, of course, turns out to be as foolish as it at first appears. For it is clear that a theory which reduces everything to psychology, though it may properly speak of satisfactory and successful experiences, cannot consistently use the word verification at all. A simple case is used to illustrate the difference between the pragmatist and the ordinary view. "John thinks Peter has a toothache; the object of John's thought is Peter's present experience; and, as a fact, Peter has a toothache. Now the intellectualist's notion of truth is this: that John's thought is true *because its object is as he thinks it*. Now let us apply the pragmatic meaning of truth to the same situation — remembering that truth here

means a 'form of the good,' the 'useful,' 'efficient,' 'workable,' 'satisfactory,' the process of verification. The truth of John's idea about Peter's experience, therefore, according to the pragmatist, *consists in* its satisfactoriness to John, in its successful leading, in its verifying itself. If it works, if it harmonizes with John's later experience of Peter's action, if it leads in a direction that is worth while, it is true (a statement to which, indeed, all might assent), and its truth *consists in* this working, this harmony, this verification process. John's thought, the pragmatist insists, *becomes* true only when it has worked out successfully, only when his later experience confirms it by being consistent with it — for remember, truth is not verifiability, but the *process of verification*. Truth *happens* to an idea. It *becomes* true, is *made* true by events. At the time when John had the thought about Peter, the thought was neither true nor false, for the process of verification had not yet begun, nothing had as yet happened to the idea. To be sure, Peter had a toothache, just as John thought, but, all the same, John's thought was not true. It did not become true till several hours afterward — in fact, we may suppose, not until Peter, having cured his toothache, told John about it. The thought, 'Peter has a toothache,' thus, as it happens, turns out not to have been true while Peter actually had the

toothache, and to have become true only after he had ceased to have a toothache. It became true only by being proved true, and its truth consisted in the process of its proof. One might perhaps be tempted to ask what it was that was proved, and to say to the pragmatist, either this satisfactoriness, this successful leading, is a proof of something outside John's immediate experience, something by which his idea is to be judged and justified (in which case truth ceases to be mere verification process and becomes at least verifiability) ; or else it is merely John's subjective feeling of satisfaction and of successful leading and consistence, with no reference to anything else to justify it — in which case it may indeed be pleasant and good, but it is hard to see why it should be called *true*. For, suppose that at the same time with John's thought, Tom thinks Peter has *not* a toothache. Suppose that, being a little stupid and perhaps a little hard of hearing, he misinterprets John's actions and expressions, and that later on he is assured by someone equally misinformed, that Peter certainly had no toothache. His thought thus works out, is successful, harmonizes with his later experience, is to him genuinely verified. The whole matter ends here and he drops the question completely, never investigating further. Were the thoughts of both John and Tom true? "

So our Protagoras, and he imagines his opponent replying, "No, Tom's thought was not genuinely verified. Only that thought was really verified and therefore true which *would have worked out had both been verified sufficiently.*" But this reply is unsatisfactory. "For what do you mean by *sufficiently*? Sufficiently, for what? To argue thus would be to presuppose a criterion (apart from the leading of the thought) to which the thought must correspond if it is to be true. If you distinguish between a genuine verification and one that is only subjectively satisfactory, you appeal to some other criterion than the process of verification — in other words you go over to the intellectualist's point of view. If on the other hand, you stick to your pragmatic criterion and say that the truth of the thought consists in *actual* satisfactoriness, then the question becomes pertinent: Were the thoughts of both boys true? Obviously they were, for both worked, both were satisfactory, both were verified. Hence it was true at the same time and in the same sense that Peter had a toothache and that Peter had not a toothache. Nor is there anything surprising in this, *if truth is nothing but a particular kind of satisfactory experience.* The principle of contradiction has no meaning and can no longer hold if truth be altogether within one's experience."

When I read these words, which so perfectly expressed my difficulty, I wondered what the answer would be. We did not have to wait long. Professor James promptly replied that he was misunderstood, saying, "Whether such a pragmatist as this exists I know not, never having myself met with the beast." He rejects most emphatically what we thought was the pragmatic theory of truth, and makes this statement: "Truth is essentially a relation between two things, an idea, on the one hand, and a reality outside the idea on the other. This relation, like all relations, has its fundamentum; namely, the matrix of experiential circumstance, psychological as well as physical, in which the correlated terms are found imbedded. . . . What constitutes the relation known as truth, I now say, is just the existence in the empirical world of this fundamentum of circumstance surrounding object and idea and ready to be short-circuited or traversed at full length. So long as it exists and a satisfactory passage through it between the object and the idea is possible, that idea will both *be* true, and will *have been true* of that object, whether fully developed verification has taken place or not."

This statement is certainly explicit and clear. It fully recognizes that truth is a relation between the idea and the objective order. And in an article in the *Philosophical Review* for

January, 1908, on "The Pragmatist Account of Truth and Its Misunderstanders," Professor James is even more emphatic. He says the pragmatist is necessarily a realist in his theory of knowledge; he "calls satisfactions indispensable for truth building, but expressly calls them insufficient unless reality be also incidentally led to. If the reality he assumed were canceled from his universe of discourse, he would straightway give the name of falsehoods to the beliefs remaining, in spite of all their satisfactoriness. For him, as for his critic, there can be no truth if there is nothing to be true about." This seems to state with perfect clearness that truth is not found within any human experience, but transcends, or may transcend, every such experience. What now does the critic say to this complaint of being misunderstood and to the new position? He does not find it difficult to show that his idea of the pragmatist view of truth is not a caricature. Not only has Professor James said the things attributed to him, but other representatives of the same school have made similar statements. Thus, Professor Dewey has said: "Truth is an experienced relation of characteristic quality of things and it has no meaning outside of such a relation." So Professor Moore: "That which is accepted as real, *i. e.*, as logically real, is one factor *within* the judging process, not something *outside* to which the

whole judgment conforms." Mr. Schiller says truth is "a function of our intellectual activity, or a manipulation of our objects which turns out to be useful." But, allowing Professor James to repudiate this view, which he says he never held, the critic asks what is the difference between this latest pragmatist theory *that truth is a relation between an idea and a reality outside of the idea*, and the view he opposes? He asks also if, as the pragmatist now admits, ideas may "be true in advance of and apart from their utility," provided their objects are "really there," how can their truth depend upon satisfactions? For if satisfactions are indispensable to the truth of an idea, it would seem that the idea cannot be true till they are experienced, "and the fact that the object of the idea is really there does not make the idea true." "Thus, John's idea that Peter has a toothache would not be true till John is satisfied, even, if as a fact, Peter actually has a toothache, and although it *is* true at the same time to Paul who is satisfied." . . . "If, on the other hand, satisfactions are *not* indispensable, if truth is merely the condition that makes verification possible, and if a belief may be genuinely true before it is verified and without anyone's feeling satisfaction, then it is hard to see that pragmatism has contributed anything in the least original or new to the conception of the truth relation. Will the pragmatists tell us

plainly which of these two contradictory views is orthodox pragmatism? ”

These long quotations will, I hope, be excused, because they take us to the heart of the subject. The lover of that philosophic diamond, clearness of thought and statement, will find beautiful specimens in Professor Pratt's essays. To arguments so cogent what answer is possible? In the *Journal of Philosophy, Psychology and Scientific Methods* for March 26, 1908, Professor James asks, “ Would it satisfy the repudiators of the fuller definition if we agreed to let them keep the word ‘ true ’ for what they stickle for so exclusively, namely, the more preliminary and objective conditions of the cognitive relation. . . . while the word ‘ truthful ’ should be reserved, as having the more concrete sound, for the entire unmutilated notion for which Mr. Schiller and I contend? Mr. Schiller and I would then appear as fighting the battles of truthfulness against truth. The question would be almost purely academic, for in actual life the true and the truthful would usually denote the same body of actual human statements or beliefs. Even now none of the *facts* which either party emphasizes has even been denied by the other party, and the quarrel might have the bottom knocked out of it altogether, so far as related to truth's definition only, by the invention of this or some other pair of technical terms.”

Such, then, is what it all comes to, so far as the play of brilliant minds about the subject has been able to show what is really there. About the value of the outcome you can form your own conclusion, after applying either or both of the pragmatic tests, what difference does it make if you believe it, or what difference does it make anyway?

The critic of pragmatism so extensively quoted in this paper points out, as I think rightly, that "an ambiguity in the word idea . . . is responsible for a great deal of the misunderstanding between pragmatists and anti-pragmatists. The former accept Professor Dewey's definition of an idea as a 'plan of action,' and look upon it as 'an instrument for enabling us the better to have to do with the object and to act about it.'"

Of course, if ideas are to be defined in this way, they can be spoken of as useful and successful, but it seems irrelevant to call them true. A good tool is merely good, not truthful or true. And the usefulness of ideas that are merely plans of action has no meaning apart from their use.

But, ordinarily, when we say that an idea is true, we are thinking not of plans or purposes, but of a judgment that a thing is so. And while we may be fully justified in speaking of plans and purposes as wise, successful or good,

only judgments can properly be said to be true.

The net result, then, is that of the two views which have been confused in the pragmatist theory of truth, one is admitted to be ridiculous even by Professor James himself, while the other is not different from the view he opposes. And the confusion, it is now clear, is largely due to the fact that when the pragmatists are talking about ideas they are thinking about plans of action, while the rest of us are thinking of statements about the sequence of events and matters of fact. It amounts to this, practically, that if the pragmatists are to be allowed to appropriate the word Truth and give it the new meaning upon which they insist, we shall simply have to find another name for that much more important thing which we have always meant when we used the term. For when we listen to others we are not concerned to hear what they think is expedient or what feels satisfactory to them, but what they consider to be true. It will be long before the pragmatist form of oath, proposed by Professor Royce, will be accepted in any court of justice: "I promise to tell whatever is expedient and nothing but what is expedient, so help me future experience."

A peculiar instructive feature of this whole episode in philosophy is the way in which the pragmatic theory of knowledge, like every theory rigidly held, demands of its devotees constant

sacrifices of fact. One of the most obvious, concrete and seemingly indisputable characteristics of cognition is its external reference. We actually do, in our thought, refer to what is beyond our experience. On their theory, the pragmatists find such transcendence a puzzle, and so deny the fact, that is, the more radical among them do. Professor James, it is true, was a realist, and may at first be considered an exception. Still, though his theory of ideas as having the function of leading, as enabling us to 'ambulate' from one part of experience to another, served him very well when only phases of experience were in question, it broke down when it was used to explain the relation of these ideas to what is wholly outside us. The 'saltatory' nature of this relation is obvious, and when James admitted it, he practically gave up his case. In fact, the pragmatic theory of truth and knowledge has been logically dead for several years. Here again, Dewey is the true exponent of the ultimate nature of pragmatism. The many-sided James admitted that, if we are to know the true from the false, there must be some reference to a reality outside our experience, while Dewey, with his theory that knowledge is a doubt-inquiry-answer experience, rejects all considerations of external reality. For the latter, the only question is as to the satisfactory or unsatisfactory character of the

experiences. Our plans work and it is well with us, or the reverse. If one still wants to know about objective truth and existence, that is a mere pre-pragmatic temper that lingers on from the days of our ignorance. It is to ask about metaphysical reality, which is no proper concern of ours and "may go to its own place."

The denial of objective reference in knowledge, and of a relation to that which is beyond experience, as necessary if knowledge is to be distinguished from error, is thus entirely comparable to the denial of the existence of the moons of Jupiter. And it affords us one more illustration of the fact that neither the biological point of view, nor any other, is absolute. It is unquestionably useful to consider those aspects of knowledge which for the logical pragmatists are fundamental and all-sufficient. But if we refuse to consider other equally important and indeed aboriginal characteristics, such as external reference, we are landed in solipsism and agnosticism.

It is now clear that James' famous doctrine of the "Will to Believe" is strictly incompatible with a thorough-going pragmatism, that is, with a theory that knowing involves no reference to anything beyond the experience of the knower. For, apart from caricatures, James really means that when we have done our best to decide about the truth of such a doctrine as that of the ex-

istence of God, and have not been able for lack of data; when, furthermore, we are compelled to act, and our action must take for granted that the doctrine either is or is not true; then, and not till then, we have the right to take the course which seems on the whole wisest. In these cases of compulsory action with insufficient knowledge, we have the right to believe. This is a very different thing from what is implied in the term, "The Will to Believe," which James laments that he ever used.

But it is of value only to men who by truth mean something more than effective working. When religious men hear that the truth of a theory is its satisfactory working, they are apt to be comforted by the statement that the doctrine of the existence of a God is true because it works. But they will not be so happy when they realize the illusory nature of this assistance. For this does not, and on strictly pragmatic principles can not, mean that we may believe in the objective existence of God because the belief helps us to live. The belief is not true in this sense. All that the right to believe can signify, on Dewey's pragmatism, is that the belief in God works because it works. To ask about God's real existence is to enquire about metaphysical reality, and that is not a legitimate question.

Indeed, pragmatism refuses to consider

whether anything is true, in the old, familiar, objective sense. Even of itself, all that it can properly do is to insist that it is a good method, not that it is objectively true.

This, then, seems to be the outcome of the whole matter. As a mere attitude of protest, pragmatism is intelligible, but not constructive. It is not to be refuted by argument, since it is partly a matter of temperament and partly a reaction in a particular thought-situation. As a theory of meaning, and a method of determining the significance of propositions, of "making our ideas clear," it has proved to be the reverse of useful. As a theory of truth and a theory of knowledge, it is obviously an overstatement of partial truths and is logically dead. For religion, this outcome is fortunate. Solipsism probably, scepticism certainly, is the necessary result of a philosophy that refuses to even consider questions of ontology, of metaphysical reality.

If this is pragmatism, and I think it deserves the right to the name, it is entirely incompatible with that venture of faith which all of us make, and which Prof. James was trying to describe in his famous and misnamed essay, "The Will to Believe." We cannot, if we are clear and consistent, call these two radically different things by the same name.

If, ignoring these technical discussions, we

think only of the etymological implications of the term pragmatism, and decide to define it for ourselves, we may do so provided we clearly realize the perfectly definite meaning we are giving to it, and do not by its use commit ourselves to precarious and one-sided ideas of life. Because we are, and must continue to be, pragmatists in one sense, it does not at all follow that the James-Dewey theory of truth and knowledge is correct. The gist of it all, the element of value in pragmatism, as thus redefined, may be stated as follows: In the general situation which confronts us all, we are constantly compelled to decide the most important matters in the absence of adequate data. Life is like riding a bicycle; we have to go ahead before we know we are right. Our knowledge is very limited, and we walk mostly by faith. Only comparatively simple facts can be calculated, and our most developed sciences deal with restricted fields. Our specialists know many things about chemical reactions, physical processes, geological changes and micro-organisms. Upon applied science our civilization largely rests, and in the growth of science is a great part of our hope for the future. But the larger the scope of a science the more inadequate and undeveloped it is. The sciences that deal with life, such as psychology, ethics, sociology, are not much more than programmes, which it is hoped future

investigations may fill up. Meanwhile, we have to live now, and it is well to realize that neither science, which is so useful in its way, nor philosophy, which synthesizes the results of scientific investigations, is a complete guide to life. They cannot yet demonstrate to us the nature of reality and the appropriate human reaction. Is the evolving cosmos, this mighty engine of mud and fire, all? Or is there in and through it a God, a life, a spirit, that is at least as great as our ideals of the noble, the good, the divine? Is the universe congenial to our ideals? Is the heart of reality akin to what we instinctively love and reverence? Are courage and faith and hope appropriate, or is the pessimist right? Are we the sole inhabitants of an otherwise lifeless universe? Are we orphans, marooned on this planet? Or is our life in touch with a great life with whom we may have fellowship? Are we mistaken in the sense we have that when we think truly, when we love, when we are loyal to the highest we know, we are living on lines that do not end where our lives end but that in some sense they are the lines of God's life?

Whichever view we take must be taken at our risk. In these matters life is necessarily a venture. It is, as someone has said, a speculation on a grand scale. And it is worth while to realize that certain, absolute knowledge is not to be had; that neither philosophers nor men of

science can tell us ; that even the founders of the world's great religions themselves knew no more than we, but that they, too, had to make the great venture.

There are many people who do not understand this. They run here and there, go to this church and that, read the new books and investigate the new religions and philosophic fads, in the hope of getting definite knowledge concerning the great themes. But a little reflection ought to show that this is vain. There is absolutely nothing for us but to select a working theory of life, live by it, and take the risk. The Socrates of the "Phaedo" long ago told us this. "I know," he said, "how hard or rather impossible is the attainment of certainty about questions such as these in our present life. And yet I should deem him a coward who did not prove what is said about them to the uttermost, or whose heart failed him before he had examined them on every side. For he should persevere until he has achieved one of two things: either he should discover or be taught the truth about them; or, if this be impossible, I would have him take the best and most irrefragable of human theories, and let this be the raft on which he sails through life — not without risk, as I admit, if he cannot find some word of God which will more surely and safely carry him." (Phaedo 85.)

To be sure, in choosing a working theory of life, we use the pragmatic method and take the one which promises best results. Experience affords some help. In the long past some theories have been found to be livable, to be, when believed and acted upon, biologically serviceable. More important yet, for we are interested not merely in existence but in noble living, certain ways of reacting toward the world have been found to produce grand and beautiful lives. The results we care most for have been achieved when men and women *have assumed that this world is a place for a manly and womanly life*, when they have taken and kept the way of courage, hope and love, when they have lived in the conviction that loyalty to the highest, even on the part of the humblest, is the supreme good and has more than temporal significance. Our theodicies, we may as well frankly admit it, are all failures. We cannot explain away all the cruelties and brutalities in the universe. Yet in spite of the facts that depress us and the arguments that threaten to reduce us to despair, it is significant that those men have lived most nobly and beautifully, most satisfactorily to themselves and helpfully to others, who have lived as if they were citizens of a moral universe, of God's world. In this spiritual situation we are necessarily pragmatists. Not only is it legitimate to decide which way we shall adventure our

lives, but we must do so. And if we are religious men, it is because we have resolved to trust our moral sentiments, because we are following, far-off it may be, but still following, and counseling others to follow those heroic souls who, in the darkest hours and most desperate situations, have said of the God who is a name for our moral ideals, "Though he slay me, yet will I trust in Him."

"But what has Bergson's philosophy to do with all this?" The question is natural and the answer easy. It would be very nearly correct to reply, "Nothing at all." The metaphysician of the life force, the strenuous upholder of the view that the primal reality is

"The Life that maketh all things new,
The blooming earth, the thoughts of men,"

is not a man of the pragmatist temper, nor does he hold the theory of truth or the theory of knowledge announced and defended by James, Schiller and Dewey. He has a very definite theory of knowledge, according to which the mind is composed of two complementary powers. The intellectual element knows the outside of things. It gives us the truth of the material world and ultimately helps us to an intuition of the very nature of matter. It is true that it is constitutionally incapable of knowing life, but we are able to get at the truth of this through

intuition, sympathy, insight. We thus have ideas that are more than plans of action. By combining into a synoptic view what sight and insight reveal, we arrive at the very truth of metaphysical reality. Bergson is therefore no pragmatist, agnostic or sceptic. Faith in human knowledge never went further, and has never been better defended.

Why, then, has he ever been classed with the pragmatists? Chiefly, it seems, because it is so common to reason after this fashion: I am a pragmatist and I hold a particular view. B defends the same or a similar view. Therefore B is a pragmatist. As we have seen, it is very difficult to know which of the many things that have been called pragmatism deserves the name. I think that what is characteristic in it is its theory of knowledge and its theory of truth, and that these theories, at least as the pragmatists hold them, are false. But there are other definitions. We are told that, in its broadest sense, pragmatism means "the acceptance of the categories of life as fundamental. It is the bio-centric philosophy." This is peculiar, vague and, on the whole, most unsatisfactory. For there are many of us who have come up to philosophy and to the problems of the moral and social life, and even of history, by way of biology and psychology, who are yet unable to accept pragmatism as a spirit, a method, or a theory

of truth. The fact is that exponents of contested views are always looking for support, especially when hard pressed, and in this case Bergson has been claimed as an ally because of his theory of the instrumental nature of the intellect and of the concepts it uses. It is perfectly true that he does regard the intellect as an instrument developed by the mind to enable it to deal with matter, but the pragmatists who emphasize this usually neglect to state the further fact that this instrument has been molded on the material environment and reveals to us something of its truth, of its nature, that is, of that part of reality. It is metaphysically incompetent only when it deals with life, the truth of which we may also know, although in another way.

But different as James and Bergson are, they agree in two fundamental points. The American philosopher follows the Frenchman in his theory, we may even say his demonstration, of the impossibility of knowing the fullness and richness of life through conceptual thought, of expressing what is essentially movement in static terms.

Both contend against the rationalistic notion that all is given, and think of the universe not as a mechanism, but in terms of growth. Says James: "*The essential contrast is that for rationalism reality is ready-made and complete*

from all eternity, while for pragmatism it is still in the making, and awaits part of its complexion from the future. On the one side the universe is secure, on the other it is still pursuing its adventures." (Pragmatism, p. 257.) Their common view is perhaps best expressed in James' essay on "Bergson and His Critique of Intellectualism," which the author of "Creative Evolution" says faithfully expresses his thought. As a preparation for philosophic study, it would be hard to find anything better than this wonderful chapter, for it contains a sun-clear statement of the nature of concepts and their relations to perceptual experience, without which no one can get far. It is not a denial, but an explicit admission of the value of a stable scheme of concepts as a means of ordering life and of enabling us to find our way about in the world. What it does deny is the notion that "logic is an adequate measure of what can or cannot be." Giving, as it does, "primarily the relations between concepts as such, and the relations between natural facts only secondarily or so far as the facts have already been identified with concepts and defined by them, logic must of course stand or fall with the conceptual method." In conceptual thought, we substitute "tracings for realities," "brain diagrams or physical metaphors for moral facts," and treat human interests as mechanical forces. These

theoretic constructions are extremely useful, since they are "maps of the distribution of other percepts in space and time." Still, they are only schematic arrangements, while "the inner movements of our spirit are known only perceptually."

I submit, then, neither James nor Bergson is an anti-intellectualist except in a limited and perfectly definite sense. The latter has taken great pains to explain that "concepts are indispensable to intuition," and is declared by James to be "accurately right when he limits conceptual thought to arrangement, and when he insists that arrangement is the mere skirt and skin of the whole of what we ought to know." Of course, it is possible to go through the books of these writers "like a myopic ant over a building," and after the manner of a partisan debater judge them by statements taken apart from their context. But whoever interprets them sympathetically and in their total intention, will not make the mistake of supposing that they can be quoted in favor of the view that "knowledge is merely experienced transition, that truth is merely satisfactory consequences and transcendence nothing but nonsense," and he will not identify their philosophy with any of those marvelous caricatures, the pragmatisms of popular imagination.

CHAPTER XIII

RELIGIOUS SIGNIFICANCE OF THE BERGSONIAN CONCEPTION OF EVOLUTION

Although the content of human life has been growing richer at a rapid rate during the last few centuries, religious and moral interests are still supreme. So far from dying out, they are to most people the very heart of life. What threatens, even remotely, these precious interests, instantly arouses alarm. Religious feeling is so strong that discussion of religious subjects, except among the like-minded, is instinctively avoided. A man who introduces such themes in the conversation of mixed companies is regarded as more or less of a fool, who does not hesitate to play with dynamite in a crowd. Arguments on religious subjects are usually more heated than judicial, and tend to degenerate into social combats. Men and women who converse rationally and agreeably on all other subjects, very often appear at their worst when their faith is in question. This is perfectly intelligible, when full account is taken of what their faith means to them.

Their religion is their working theory of life on which they are staking their happiness and their destiny, and it includes the ideals which they worship and strive to follow. To strike at this is to threaten their lives, and they can no more be unconcerned and judicial than can a mother when her children are in danger.

Substantially the same thing is true of the moral interest. This also is instinctively felt to be what it really is, not merely one interest among many of about equal importance, but a supreme concern of life. The question whether we shall be good or bad takes, as Plato said, precedence of all else. Moral ruin means total ruin, the disorganization of life. This instinctive moral feeling manifests itself sometimes in unlovely and absurd ways, as when fanatics drape the most beautiful of statues and suppress innocent and wholesome amusements; but it is nevertheless on the whole justified. There are people who cannot enjoy Goethe's poetry because they object to his private life, and Wagner's music is spoiled for them because they believe that the famous composer was disloyal to his friends. It is, of course, regrettable when ethics thus obtrudes itself unnecessarily in æsthetics, but such facts serve to keep us vividly aware that the religious and moral interests are still supreme. When, therefore, we read that religion is dying, and that it is to be replaced

by science, or social service, or socialism, we know at once that we have the opinion of a superficial observer of human life, of one who confuses the decline of certain dogmas and institutions with that of the religious life of which they are historic expressions, or it is perhaps the theory of someone who is generalizing from his own experience or that of certain sections of society which are now in an attitude of revolt but which will inevitably come in time to a more positive and constructive spirit. The question of questions, then, for wholesome, normal people, is and doubtless will continue to be that of morality and religion. What they want to know about Bergson, as about every other great thinker, is, first of all, the bearing of his thought on their working theory of life, upon their ideals, upon the courage, faith and hope which enable them to live and feel that life is worth while.

It is only putting the same question in a different form to ask,—What does Bergson think about teleology? For religion seems bound up with a teleological view of the world. If the whole is a machine, a mechanical scheme, if there is no meaning or purpose in it, our lives seem to lose their significance, and we are like children realizing for the first time that they are orphans. The very essence of religious faith has perhaps received its concise and classic expression in Browning's lines,—

" This world's no blot for us
Nor blank; it means intensely, and means good:
To find its meaning is my meat and drink."

All great religions, therefore, whatever their differences, are found to involve or imply, even when they do not consciously uphold, a philosophy of history. And Tolstoy was substantially right when, in his work on the nature of art, he said that to be unreligious is to have lost the clew to history, to be without any noble conception of its meaning. Moreover, all the philosophies of history which are inspiring rather than depressing agree in assigning to man a significant place in the cosmos, and so give to him a sense of dignity and worth.

The philosophy of evolution, in particular, gives a new and immense sweep to human thought. It literally puts a meaning into history, into time, past, present and future. What intelligible conception of the past could our ancestors form in the old, pre-evolutionary days? We are so accustomed to the idea that something has really been accomplished, achieved, in the long ages of which we are the heirs, that we cannot understand how the world must have looked to those who thought of it as simply existing. Evolution has widened our horizon and given us an organic conception of the world-process in time, so that it is now not merely a

question of the place of our people in history, but of humanity in the biological realm, and of life in the cosmos. We dare to think that the whole past had a meaning, that we are the heirs of the ages to whom the ends of the world have come, that in our part of the universe we are the highest product of the creative power at work through all past time. As the whole process flowers in humanity, so humanity flowers in lives of goodness, intelligence and love, in the saints, the saviors, the inspirers and helpers of our race. And since we can form no rational notion of how a process is to be interpreted except by its outcome, we seem logically compelled to regard the meaning of the universe as indicated in its finest and noblest lives, and in the qualities to which those lives aspire. When we consider what the best men and women are, and what they are striving to be, we may legitimately though modestly claim that we have some true, even if inadequate notion, of what the universe is doing, of the increasing purpose of the ages. For, as Schopenhauer truly saw, we are of the stuff of which the world is made, the ultimate reality is what we are, and there is nothing in us, even our highest aspiration, which is not an expression of that life of our life.

There is more than one form of the philosophy of evolution. The Spencerian conception, which is the most familiar, has the defect of not being

thorough-going. In this view there is no real evolution of the power behind evolution, of that reality which he sometimes spoke of as the Unknowable, sometimes as the All-Being, and sometimes as the Infinite and Eternal Energy from which all things proceed. Evolution, as he understood it, is not of this reality, but takes place in the realm of the phenomenal, and consists in a redistribution of matter and motion according to certain laws. Of this process, there is no permanent result. The complex system of atoms changes its configuration, and energy is ceaselessly transformed,—that is all. After the integration of matter comes its disintegration, and evolutions and dissolutions succeed each other without end. Nothing is being built up that is to last, nothing is really achieved in time.

Bergson, on the other hand, belongs among the romantic evolutionists in the sense that for him it is real being, or, if you will, the absolute, that evolves. Time is, therefore, not resultless. The ultimate reality is a creative, evolving life. Now, since life as we know it in ourselves is a thing of purpose, Bergson seems to be moving straight toward a teleological philosophy, especially since he says explicitly that "life is of the psychological order," and that consciousness in general must be "co-extensive with universal life." When, in addition, he has shown the utter inadequacy of the mechanistic world-view, there

seems to be no alternative remaining but a teleological, *i. e.*, religious philosophy. This apparently logical consequence of his premises, however, he refuses to accept. He rejects teleology and is at great pains to explain why, although his rejection of this way of regarding life is qualified, and not so absolute as some of his interpreters claim. Some time ago I had a conversation on this point with a cultivated gentleman who had himself given a series of lectures on Bergson's philosophy, and who would not listen to the suggestion that teleology had not been completely and finally banished from the theory of Creative Evolution. Having rejected all such elements from his own thought-scheme, he was a trifle impatient on being told that he could not claim the French thinker as a defender of his extreme position. As this is a matter of the greatest importance, it deserves to be examined with some care. No good can come of arbitrary interpretations of this or any other philosopher, or of attempts to force an unintended meaning into his utterances, in the interests of any views, whether religious or unreligious, which we ourselves hold. It is necessary, first of all, to be perfectly clear as to what Bergson thinks about the subject, and why he takes precisely that position and no other. It will then be in order to criticise the view and to show, if, as I think, it can be shown, that Berg-

son's premises will take the consistent thinker much further than the philosopher himself has gone.

Recall, in the first place, the theory of knowledge upon which this whole construction rests. Life is the primary reality. As it has organized plants and animals, as it has produced sense-organs, hands and feet, wings and fins, so it has developed that other instrument of adaptation which we call the intellect. This implement, which life uses for perfecting adjustments to the material world, itself makes use of certain instruments which we call ideas or concepts, chief of which are two, those of mechanism and teleology, or, to use Bergson's terms, mechanism and finalism. In dealing with unorganized matter, with the world of objects and things, these thought-frames are quite adequate and satisfactory. But when we seek to apply them to life, for which they were not made, we find that both are inapplicable, though not in the same degree. Bergson's words are,—“We try on the evolutionary progress the ready-made garments that our understanding puts at our disposal, mechanism and finality; we show that they do not fit, neither the one nor the other, but *that one of them might be recut and resewn, and in this new form fit less badly than the other.*” (Italics mine.)

We have here an intimation that though

neither the machine view nor the purposive view of the world is true, the latter is at least nearer the truth than the former, and, moreover, is susceptible of being put in a less objectionable than its ordinary form. In fact, the reader must be careful not to overlook the qualifying statements which this thinker, who is careful as well as bold, is constantly making. For instance, he rejects the theory of mechanism because it is a rigid scheme which forces those who hold it to deny or ignore the obvious facts of life. There is no place in it for the constant upspringing of the new, for the maturing and ripening characteristic of what really lives, for the effect of time, for individuality and freedom. There is a difference between the living and the lifeless, and mechanism ignores this difference. For this theory, all is given, and the new is inconceivable and therefore inadmissible. Reality actually is creative, but in a universe which is a mechanism, nothing more is possible than rearrangements of the parts. Life is a larger thing than either mechanism or finalism, which are, at bottom, "only standpoints to which the human mind has been led by considering the work of man." The intellect is an instrument created by life, and concepts, such as those of mechanism and finality, are instruments of the intellect; consequently to try to conceive of life in such terms is to try to put the whole into a part of

a part. Now the physicists and chemists who are investigating organic structures would be wrong to take such statements as an indication that Bergson regards their researches as illegitimate or futile. If they read further, they will come upon such qualifications as this: "I recognize that positive science can and should proceed as if organization was like making a machine. Only so will it have any hold on organized bodies. For its object is not to show us the essence of things, but to furnish us with the best means of acting on them. Physics and chemistry are well advanced sciences, and living matter lends itself to our action only so far as we can treat it by the processes of our physics and chemistry. Organization can therefore only be studied scientifically if the organized body has first been likened to a machine. The cells will be the pieces of the machine, the organism their assemblage, and the elementary labors which have organized the parts will be regarded as the real elements of the labor which has organized the whole. That is the standpoint of science. Quite different, in our opinion, is the standpoint of philosophy." (C. E., 93.)

This means that for the practical purposes of life, e.g., for medicine and for the industries and manufactures which use organic products, the methods used in the physical and chemical laboratories are the best. It is only necessary

to remember that in such cases life is viewed in a special and partial way, and that we must not make a metaphysics of our practically useful concepts. "If science is to extend our action on things, and if we can act only with inert matter for instrument, science can and must continue to treat the living as it has treated the inert. But, in doing so, it must be understood that the further it penetrates the depths of life, the more symbolic, the more relative to the contingencies of action, the knowledge it supplies us becomes."¹ (C. E., 198.)

¹ The reader who desires to know something of the astonishing number of processes which biochemistry has already discovered in protoplasm may study the lucid little summary, entitled "Chemical Phenomena in Life" by Ferdinand Czapek, published by Harper and Brothers, New York, 1911. He will there learn that protoplasm has a peculiar chemical constitution and a mechanical structure, and upon these, according as one or the other seems the more important, are based the Stuff Theories and the Engine Theories of life. Protoplasm is a colloid, an albumin sol, or rather a group of colloids, which has many of the physical and chemical characteristics of true solutions but also properties which are found only in suspensions. Besides the nucleus of the cell, there is the protoplasmatic membrane which has peculiar functions more or less well understood, and in the narrow space it encloses go on a great number of chemical processes. Some of these are due to soluble ferments called enzymes, such as diastase, which are divided into groups, the hydrolases, esterases, carbohydrases, lipases, amidases, proteases, coagulases, oxidases, reductases, carboxylases, etc. We read also of pro-enzymes or zymogens, of a group of peculiar compounds called hor-

There are some minds which seem determined by their constitution to exaggerate all differences. They habitually use superlatives, never having realized the value of the positive degree. What seems good to them, they call divine, the inferior being condemned as diabolical. He who criticises them, they regard as an enemy. Essentially partisans, they denounce the saner men who see the various sides of vexed questions and the complexity of nearly all concrete situations. There is no gradation of light and shadow in their mental pictures. "Let darkness keep her raven gloss"; "he who offends in but one point is guilty of the whole law,"—such are their favorite maxims. Natures of this character are incompetent in philosophy, although they are precisely the ones that need it most. When they meet with an original construction such as that of Bergson, they seem unable to take notice

mones, which exert stimulating or regulating effects on the organism. Then there are numerous toxins and anti-toxins with which Immunochemistry deals. There are substances such as opsonines, bacterolysins which serve for the protection of the organism, and others such as aggressines which "assist parasites against their hosts." One does not need to be a chemist and know a great deal about these matters at first hand to understand that the chemical investigation of living matter promises results of great practical value, even if one sides with Bergson rather than with this professor of plant physiology, who regards life as "on the whole nothing else but a complex of innumerable chemical reactions in the living substance which we call protoplasm."

of the qualifications which the philosopher makes of his own doctrines. We have just seen that he justifies and makes place for mechanistic conceptions in science, and in the case of finalism he goes even further, saying that "one accepts something of it as soon as one rejects pure mechanism. The theory we shall put forward in this book will therefore *necessarily partake of finalism* to a certain extent." (P. 40.) "The philosophy of life to which we are leading up claims to transcend both mechanism and finalism; but it is nearer the second doctrine than the first." (P. 50.)

It is easy to see why Bergson rejects finalistic conceptions. To him they imply a rigid scheme, "a programme previously arranged." The universe, on that theory, would be like a phonograph, and our lives like the "records." When the machine works, the songs or speeches represented on gutta percha disks would come out. But this is mechanism again, only it is an inverted mechanism, in which "the attraction of the future is substituted for the impulsion of the past." All is given, all is rigid and mechanical, and there is no room for the invention, the creation, the incalculable, which are characteristics of our human experience. In short, it is not life. We cannot therefore regard life as the realization of a plan, for a plan is an idea, and life creates ideas as it moves on-

ward. "Evolution does not mark out a solitary route; it takes directions without aiming at ends, and it remains inventive even in its adaptations." If life were nothing more than the realization of a plan, what would the final completion of its activity mean? Suppose there is a goal and that it is finally reached: what then? For Bergson the question is its own answer: there is no finality. "Nature is more and better than a plan in course of realization. A plan is a term assigned to labor: it closes the future whose form it indicates. Before the evolution of life, on the contrary, the portals of the future remain wide open. It is a creation that goes on forever in virtue of an initial movement. This movement constitutes the unity of the organized world — a prolific unity, of an infinite richness, superior to any that the intellect could dream of, for the intellect is only one of its aspects or products." (C. E. 105.)

This sense of the inadequacy of conceptual thought to express life's fullness is what was in Tennyson's mind when he wrote the lines:

"Our little systems have their day;
They have their day and cease to be;
They are but broken lights of Thee,
And Thou, O Lord, art more than they."

Another reason for rejecting the teleological view of reality Bergson finds in the fact that evo-

lution is not along one line only. Finalistic thinkers usually slip over this difficulty too easily; they tend to forget that there are many divergent tendencies in the living world; that nature is like a tree whose branches grow more numerous and separate more and more widely from each other and from the common trunk. Such unity as there is in life Bergson thinks is due rather to an original impetus, a *vis a tergo*, than to an ideal harmony, "a far off, divine event toward which the whole creation moves." "So the discord between species will go on increasing. Indeed, we have as yet only indicated the essential cause of it. We have supposed, for the sake of simplicity, that each species received the impulsion in order to pass it on to others, and that, in every direction in which life evolves, the propagation is in a straight line. But, as a matter of fact, there are species which are arrested; there are some that retrogress. Evolution is not only a movement forward; in many cases we observe a marking-time, and still more often a deviation or turning back. It must be so, as we shall show further on, and the same causes that divide the evolution movement often cause life to be diverted from itself, hypnotized by the form it has just brought forth. Thence results an increasing disorder. No doubt there is progress, if progress means a continual advance in the general direction deter-

mined by a first impulsion; but this progress is accomplished only on the two or three great lines of evolution on which forms ever more and more complex, ever more and more high, appear; between these lines run a crowd of minor paths in which, on the contrary, deviations, arrests, and set-backs, are multiplied."

Apropos of this passage, and there are many others of the same character in the pages of "Creative Evolution," it may be remarked that men of science, especially zoölogists and biologists, ought to find a delight in reading Bergson, that is, if they care for philosophy at all. For he is the most empirical of the world's great thinkers. The difficulties he cites in the way of teleological views are not those which would be fully appreciated or deeply felt by mathematicians, physicists or literary men. He has contemplated long and earnestly the panorama of the living world, the complex relations of the innumerable species of plants and animals. That is, he has gazed at the spectacle of life and not merely read about it in a book. I do not know of any other philosopher of his class who has faced these difficulties with such knowledge and such frankness. The theodicies of most of them are too easy, and those who, as a result of long study of nature, have an adequate sense of her disharmonies and incoherences, have been waiting for a thinker who could give us a comprehen-

sive interpretation of nature with a place in it for the concrete facts of life.

Bergson offers as a help in understanding the great process the conception of an *élan vital*, a *poussée intérieure*, an enduring impulse or life force, an original impetus, which is at first undifferentiated but which splits up as it grows. As an hypothesis, it fits a multitude of the facts of life of evolutionary history fairly well. But I venture to suggest that there is a certain ambiguity about the term, a vagueness that becomes troublesome when the discussion turns upon the purposive aspects of life. Although Bergson warns us against the physical connotations of the term, and says explicitly that this life force is psychological in its nature, is consciousness or superconsciousness, the reader gets the impression that in his biological discussions Bergson himself does not always sufficiently remember this. For instance, he has a chapter on "the meaning of life." But *how can there be meaning without purpose?* He says that evolution "takes directions without aiming at ends." A physical force might do that, but not a conscious life. If the cosmical *élan* keeps a direction through whole geological ages, and is "inventive in its adaptations," if through millions of years and in spite of countless defeats and failures, it "strives" in the direction of the freedom it attains in man, it is impossible not to attribute

to it some knowledge of its end. We can not use such language and deny the purposive character of the movement.

Indeed, purpose is implied in the very term "creative evolution." Bergson, rightly, as it seems to me, insists that the facts of orthogenesis are unintelligible except on the assumption of some impulse "which passes from germ to germ across the individuals," so that the constant variation in a certain direction which builds up a new species is not an accident. He even admits that in the orthogenetic development of the eye, "a psychological cause intervenes." "A hereditary change in a definite direction, which continues to accumulate and add to itself so as to build up a more and more complex machine, must certainly be related to some sort of *effort*, but an effort of far greater depth than the individual effort, far more independent of circumstances, an effort common to most representatives of the same species, inherent in the germs they bear rather than in their substance alone, an effort thereby assured of being passed on to their descendants." If, however, this effort which bridges the interval between the generations and unites them in a process of development is not a physical force, but is psychological in its nature, how can it fail to be aware of what it is doing? *How can there be effort main-*

tained for ages by a psychological cause without purpose?

Of course, this has not escaped Bergson. He realizes that teleology is implicit in all such terms as development and progress. "In speaking of a *progress toward vision*," he asks, "are we not coming back to the old notion of finality? It would be so, undoubtedly, if this progress required the conscious or unconscious idea of an end to be attained. But it is really effected in virtue of the original impetus of life," etc. To me, progress does require such an idea of an end, for without it the process would seem of necessity to be purely physical. Bergson's reserve is the more puzzling in that he expressly says that the life tendency in its action on matter "implies at least a rudiment of choice, and a choice involves the *anticipatory idea of several possible actions*. Possibilities of action must therefore be marked out for the living being before the action itself. Visual perception is nothing else." (C. E., p. 96. Italics mine.)

The dramatic story of the age-long effort of the cosmical life force to insert some indetermination into matter, to build up organisms whose action should be really free, cannot be told except in language which implies the teleology which Bergson rejects. If this primitive impetus were purely physical, this would not be

true. But it is not pressing a metaphor too far to say that we have a real drama in the story of the successes and failures of the life that is in the universe "to create with matter, which is necessity itself, an instrument of freedom, to make a machine which should triumph over mechanism, and to use the determinism of nature to pass through the meshes of the net which this very determinism has spread." In the human brain and nervous system, which is a complicated switchboard that makes possible a variety of responses to stimuli and so affords a way of escape from the determinism of simple reflex action, Bergson sees the chief triumph of organic evolution. "That the main energy of the vital impulse has been spent in creating apparatus of this kind is, we believe, what a glance over the organized world as a whole easily shows." The life of the human body is therefore "on the road that leads to the life of the spirit." The history of life "manifests a search for individuality." It is the story of a conscious or superconscious reality, *which is essentially invention and freedom*, pursuing its course through all the ages of evolution, overwhelmed by automatism in the vegetable, sunk in torpor in the echinoderms and mollusca, and finally attaining to an expression of its instinctive nature in the highest of the arthropods and of its rational powers among the vertebrates, i. e., in

man. What is this which keeps its course, which faces obstacles with inventiveness, which is thwarted often but after millions of years attains a partial success? Can we say all this of it and deny it purpose? It is true, as Bergson says, that the more we fix our attention on the continuity of life, and we may say on its achievements, "the more we see that organic evolution resembles the evolution of a consciousness."

The effort to avoid finalism therefore proves futile after all. If the *élan vital* is lifeless, if it is a physical force, we can think of it in terms of mechanism; but if it is a life, then we have no other alternative than that of attempting to recut and resew that other ready-made and badly fitting garment which the understanding has put at our disposal, namely, finalism or teleology. Let us see what we can do in this line.

CHAPTER XIV

RELIGIOUS SIGNIFICANCE OF THE BERGSONIAN CONCEPTION OF EVOLUTION (*Continued*)

In the Platonic dialogues and in the Homeric poetry, the characters who are starting on an adventure or beginning a difficult argument often preface their undertakings with an invocation to the gods. It will be enough for us simply to remark that constructive thinking, to be helpful, must be thorough-going. Whoso lacks logical courage or, having put his hand to the plow, looks back, is not fit for the kingdom of thought. *Nulla vestigia retrorsum!* The half-way modes of thought, the evolutionary theories with reservations, with large areas of reality marked off and posted with signs of "No Trespass," are but the pitiful makeshifts of timid thinkers, and the only service they can render is to ease for those who make them the path to a logically untenable position. Bergson is peculiarly satisfying as a constructive thinker because of the clear and consistent way in which his thinking is carried out, and because of

the frankness with which he faces the real difficulties. Moreover, the evolution he describes is a real process, not an illusion, a mere appearance in the phenomenal. Time is real, and there is "a progressive growth of the absolute." The universe, regarded as a whole, evolves. All that we know anything about is part of the great process, the latest, finest, highest intellectual, moral and spiritual aspects of life as well as those which are more material, crude, sensual and gross. What is necessary, first of all, is to fully realize that as "there is unbroken continuity between the evolution of the embryo and that of the complete organism," as "life does but prolong this prenatal evolution," so there is the same organic connection between the lowest forms of aboriginal life and the highest reaches of spiritual activity of the finest specimens of the human race. To comprehend the significance of the truth that the highest and the lowest, the earliest and the latest, the natural and the spiritual, are bound together in the unity of a process of development, is to attain to conceptions of the greatest value. For, rightly viewed, the relation between the humble beginnings of life on the earth and the spiritual elevation of its manifestations in the most highly evolved men, takes nothing from the latter but rather transforms our conception of the former. Man, even as he is, be-

ing the outcome of the world-process, gives that process its meaning,—a meaning that w itself appear more profound as human life advances toward the ideal and achieves what transcends the present powers of the constructive imagination.

It is now clear why religious thinkers make mistake when they are half-hearted in their acceptance of the philosophy of evolution, and when they try to prove that the spiritual life of humanity is an exception, a miraculous addition to the world-process rather than its outgrowth. Such a disjointed theory is unsatisfactory from every point of view, the religious and moral as well as the purely intellectual. Vain is the effort to find some nook or cranny in the cosmic process for the supernatural. Precarious is the faith of those who are looking for some place outside the realm of the natural for God and the higher nature of man. Thus, Alfred Russel Wallace agrees with Darwin that man's body was developed by natural process, but he makes an exception of the intelligence of the high moral qualities. Man's spiritual nature, he thinks, is superadded, not evolved. "The love of truth, the delight in beauty, the passion for justice, and the thrill of exaltation when we hear of any act of courageous self-sacrifice, are the workings in us of a higher nature which has no

been developed by means of the struggle for material existence."

That Wallace has failed to make out his case, that the consensus of opinion is against him, will cause no regret to those who understand the real situation. Indeed, I can hardly imagine anything more disastrous to philosophy and religious faith than for Wallace's idea to have proved true. For, as I have elsewhere tried to show, all our hope lies, not in disproving naturalism, but in making it thorough-going. It is precisely because man is inside the natural realm, wholly inside and all of him inside, body, soul, and spirit, that we are not only justified in holding, but logically driven toward, a spiritual interpretation of the universe. For see, what is it that depressed us but our conception of nature as merely physical, as a material, mechanical process? But a process that includes man cannot be so conceived. That which is dead could not originate life, that which is material could not produce and sustain civilization. When we are forming our conception of nature, we cannot leave man out. A nature that produces life, that blossoms out into consciousness, the love of truth, the passion for justice, the thirst for righteousness, and the longing for ideal perfection, is the only nature we know anything about. The trouble with our agnostics

is that their thought halts when it ought to be thorough-going. It is clearly unjustified to form a conception of nature from a study of her lower, more inorganic processes, leaving out her higher product, man, and then to say that nature so conceived explains man. The fact is that human nature in its very early development, in the visions of its poets and prophets, of its philosophers and men of science, is simply nature in its upper ranges. For man is no alien. He has not been injected into the realm of the natural from the outside. He is an outcome of the world-process, and no wonder that the qualities that he has manifested have been drawn from an extraneous source.

All is natural, then? Yes. Including man. Yes, including his life, his love, and his intelligence in the world. No rose on its stalk, no bird building its nest, no creature fulfilling its duty of its being, is more natural than was Socrates drinking the hemlock or Jesus on the cross. From this conclusion there is absolutely no escape. It is only necessary to be clear-headed and see the significance of the truths and principles that we accept without hesitation, in order to have a religion once more. And what magnificent view it is that now opens before us! It rewards us for refusing timidly to halt at a promise or attempt to go back! The view is that of a great process, seemingly m

physical, and mechanical in its lower ranges, but evolving at last into a world of conscious, aspiring beings, into faith, hope, and love, into philosophy, science, and art, into a vast society of social beings, with imperfections no doubt, yet with dreams of perfection and earnest efforts to find out and fulfill the law of their being. If, as is but fair, this great process be interpreted by its achievements and aspirations, rather than by its obscure beginnings, what must we say of it when we see that it has produced saints, sages, and saviors, and the still higher ideals which they worshiped, but did not attain? Yet the implication of ordinary naturalism is that in the laws and forces of the physical part of the universe we have the real, essential nature. A more enlightened naturalism will say that the great process is to be judged by its outcome rather than by its earlier phases, and that the noblest fruits of its long development are the best expressions of its real nature.

Below the living realm natural processes may be unconscious. The mote in the air current and the sun in its course may be moved by forces as purely physical as they seem. And, though animals exhibit evidences of consciousness, there is nothing that leads us to suppose that any one of them has an ideal to which it strives to conform its life. In man, however, the great

process becomes self-conscious. He strives to find and fulfill the law of his being: he co-operates in his own evolution. His worship is as natural a function as digestion, and for his further progress as necessary. When he ceases to adore and strive to realize ideals, he ceases to grow. His prayer, his longing for an unattained perfection, is the impulse of growth become conscious. To dispense with religion, then, is to forego all further development, for the moral aspirations are merely anticipations of coming reality, the promise and potency of a nobler future.

To some this view will at first appear too religious, too inspiring, too beautiful to be true. Yet it is one which it is not merely permissible to hold. Rather is it a view to which we are driven when we acknowledge that man is no foreigner who has effected an entrance into the universe, but an outcome of its life. When we are consistent in our naturalism and draw the ultimate consequences of our scientific principles, the position I have been trying to state seems unescapable. A realization of the profound significance of this truth will bring again joyous faith and buoyant hope. Estimating nature by the spiritual values she has produced, we see that she must be as divine as our divinest dreams.

Furthermore, this interpretation is no private

fancy. Toward it the clearest and best thought of our time is converging. Thus, Prof. F. J. E. Woodbridge of Columbia University, New York, declares that we must draw the necessary conclusions from the accepted view of the natural origin of our race. He says that "Narrow and straightened naturalism has erred in its estimate of Nature. . . . Having learned that Nature works by machinery, it neglected the obvious fact that the machinery exists to support and maintain its product. The future historian will note the neglect and characterize our age as one strikingly lacking in intelligence. He will note our vast industry, and comment on the fact that, while we made great machines to support and sustain the products of that industry, we could none the less regard Nature as purely mechanical, with no product to exalt and sustain. We have been so afraid of the doctrine of final causes and of assigning deliberate intentions to Nature, that we have forgotten that she has produced, supported, and sustained human civilization. For man is a part of Nature, carried on by her forces to work the works of intelligence. In him she bursts forth into sustained consciousness of her own evolution, producing in him knowledge of her processes, estimation of her goods, and suspicions of her ultimate significance."

Well may the professor continue, "This is a

truth of Nature and not a product of human fancy; and it is a truth fraught with the profoundest emotional import." He who perceives this import has found the way out of "darkest" into an enlightened naturalism; for it is evermore indisputable that man, not in his body only, but in his higher nature, in his religion and spiritual life, is an outgrowth of Nature herself. It is simply a fact, as this thinker says, that man "has grown out of Nature's own stuff and been wrought in her workshop. He is, then, no mere commentator on the world or spectator of it: he is one of its integrations, so to speak, a supreme instance where Nature has measurably evaluated herself. His comments are Nature's self-estimate."

An admirably clear statement of this interpretation is given by Sir Henry Jones in his series of lectures entitled "Idealism as a Practical Creed." It is as follows:

"A little while ago the realm of nature was hardly recognized as a coherent whole. The physical sciences were feeble, they worked apart, their provinces did not intersect. Physical life stood, apparently, unrelated to its material substrate: it was taken as a clear addition to it. Within the domain of physical life itself there were fixed species, each of them describable by itself: the problem of their connection was not raised. Man as a rational and responsible be-

ing stood aloof from all — an exception and addendum to the natural scheme. Even his own nature was riven in two: his body was merely the temporary tenement of his soul. On all sides there were interstices, and rifts, opportunities for miraculous interventions — which came. For, beyond the natural world and around it, ready to flow in upon it at any moment, there was another. It was the object of faith rather than of knowledge, of spiritual rather than natural vision. . . . God dwelt in that remote region of moveless mystery, in sovereign majesty inscrutable. . . . But of intrinsic or rational continuity between that world and this there was none. . . . Now all is changed. . . . Belief in the unity of the natural universe, including man, is now practically universal in civilized communities. There are neither interstices nor rifts; there are no causes without *natural* consequences, and no effects without natural and necessary antecedents — no mere accidents anywhere. The whole scheme is compact, and man is a part of it. His physical nature is inextricably intertwined with his bodily frame; he is not spirit *plus* soul, *plus* body; but spirit, soul and body interfused; a sensuous-rational being, continuous with the world in which he lives. *All being is of one tissue.*"

What is the consequence? What, indeed,

can it possibly be but that, seen in this light, "Nature ceases to be merely natural," and naturalism is transformed into a religious idealism? In this magnificent conception, we are finding "deliverance from the cramping dualisms of the previous age." We now see that "Natural science corroborates the truth which the poets and philosophers divine. Man, it tells us, is not an exception to the scheme of things, or a divine after-thought and addendum to a dead world. He is part of nature's tissue. He is brother and blood-relation to the brute; nay, he was present in promise at the dawn of being, waiting to be evolved. The potencies of his spirit slumbered among the molten masses and the fiery vapors. For all is one scheme. Evolution tolerates no break, brings forth nothing altogether new, permits nothing to become altogether old. It builds the living present from the dying past, forgetting nothing, abandoning nothing in its course, least of all the dormant promise of the emerging ideal. *That* is immortal, present from first to last and maintaining itself in every change. Every step in the cosmic process is its self-emancipation, until at length it stands declared in a form worthy of itself; and it shows itself as spirit."

"In the light of this, the last achievement, *the meaning of the whole process becomes visible*, and Nature, bereft of life by the abstract

dualisms of the previous age, comes to her own again. *Presenting her as instinct with purpose and order and beauty, the poetry and philosophy of the present day, present her in truth.* For she is their treasury. She possesses what they find, reveals what they discover, bounteously yields all that they gain. *Their thoughts are her communications: she fills their mind."*

"Enlightened by his world, guided and restrained by its mute laws, man achieves some knowledge, and acquires some wisdom and strength. Left to himself he were utterly without resource, a blind soul groping in an empty void. Man becomes strong only in the strength of nature; for he is sustained by her verities. She is his coadjutor and partner in the enterprise of life. On the other hand, *nature has meaning and highest worth only in relation to the man she evolves. She blooms into full significance only in his spirit.* For spirit holds together what else were scattered, overcoming the discreteness of time and space and circumstance. Only where there is mind is there order, or beauty, or purpose, or significance." (Pp. 236f., 145f. Italics mine.)

One of the most brilliant and compelling statements of this truth has been made by Prof. L. P. Jacks. He points out the significance of the fact that a philosophy of the universe must include itself as one of the things to be explained.

"The type of thinker too commonly met with to-day is one who violently seizes a point of view outside the problem he is seeking to answer, and builds for himself a crow's nest of observation on territory and out of material secretly filched from the object of his inquiry." This omission of the philosopher himself, this suppression of an important factor in the situation, is not simply pardonable modesty; it "turns out on nearer view to be mere defective logic." "We ask the philosopher, who explains how all things come in, not to forget to explain how he happens to come in himself, and what in the total production is the significance of his part. The secret of the Universe being, for instance, matter and force, is it a fact of no significance that the Universe has somehow managed to find out and publish its own secret, and to grow hilarious, contented, pessimistic, or heroically defiant, as the case may be, over the discovery? . . . What kind of a Universe is that which contains, as this Universe undoubtedly does contain, Mr. Herbert Spencer's 'Synthetic Philosophy'? How is our conception of Nature affected if we are to admit that Haeckel, T. H. Green, James Martineau, with all their speculations, are natural products? Or when Huxley discovers that Nature is indifferent to the moral needs of man, what is that in Huxley which makes the discovery, and what is the dis-

covery itself? Do these fall outside of Nature or inside? If inside, what shall we think of a Nature which in the fullness of time is able to produce a brilliant essay on her own shortcomings, and advise men how best to bear themselves in consequence? If, on the other hand, Huxley and his works fall outside of Nature and have nothing to do with her, then to what or to whom do they belong? Were Huxley to admit, as probably he would have done, that, after all, the 'Romanes Lecture' is Nature's doing, then, we must ask, is she also responsible for the very different view of herself put forward in Martineau's 'Study of Religion,' and, in addition to that, for the attempt to reconcile these contradictions which we call Hegelian?"¹ Either these men view the world *ab extra*, like the God of Deism, and are mere spectators of a cosmos in which they have no lot or part, or they are themselves organic elements in the whole. In the latter case, our conception of Nature is necessarily transformed. A logical Monism can escape facing the fact that Nature actually does "confess her moral indifference by Huxley, proclaim her moral concern by Martineau, and strive to reconcile the discord by Hegel." If Haeckel explains the Universe and leaves out himself and his philosophy, he is only a dualist after all. But if we see clearly that such a pro-

¹ The Alchemy of Thought. P. 83 f.

cedure is logically impossible, then "there is no escaping the conclusion that it is the Universe itself by means of Haeckel, and not Haeckel apart from the Universe, which answers its own riddles in the systematic and intelligent manner of the German biologist. And that discovery will send you further than Haeckel in search of light." That is, if the Universe is really one, it thinks through the philosophers and through them produces a variety of self-expressions, and it follows absolutely that "every form of Monism implies that the Universe is self-conscious." Thought is thus rewarded when it is comprehensive and thorough-going. The conclusions it reaches prove to be in accord with what the best of our race have felt to be true. In the admirable words of Prof. Jacks, this "doctrine, far from being novel, can claim a witness wherever Religion and reflective Conscience have found a voice. 'Thus saith the Lord' is ever the word of the Prophet: 'Thus thinks the Whole' is but the deeper implication of the Prophet's cry. 'Our wills are ours to make them Thine'; and Thought is ours for no other end. Were the second false, the first could not be true. Thought, like morality, must lose in order to find; and in surrendering her insight to the All-of-Things, she achieves on lighter terms a victory won in other spheres at the cost of agony and bloody sweat. We are not here

straining after far-fetched and unheard-of things; we are repeating our daily confessions and moving among our most familiar thoughts. With impeded utterance and a slightly foreign accent, philosophy is here speaking the language which ever flows from the lips of Religion with the easy music of a mother-tongue."

To some such view, a consistent and thoroughgoing philosophy of evolution must eventually come. It seems to me that logic not only permits it, but compels it. If we have no life that is not natural, then the divinest prayer of the divinest man in history is but the world-life become conscious and articulate. Naturalism, when consistently carried out, is transfigured and becomes a religious philosophy. For we now see that it does not mean that man is swallowed up in a process that goes mechanically on, but rather that he must change his conception of that process, since he is its outcome. Put together the two things that belong together, man and the universe, and then consider what kind of a universe it is that is flowering out into a human world of thought and love and righteousness, of peace, hope and joy. Materialism is forever dead, for all that ever made it possible was the fact that in constructing it only that part of nature which lies below the realm of life and conscious purpose, of aspiration and creative genius, was taken into

account. But a philosophy that does not take human life among its data, that in its formation ignores all but the physical aspects of existence and when formed is applied to the explanation of the higher values, is by that very fact condemned and henceforth ridiculous.

Nevertheless, there is a very serious difficulty in the way of this view, one which I have not believed insuperable, but is very difficult to resolve. It is this: Evolution is not along a single line. We may be the terminal twigs on a certain branch of the great tree of life, but there are other branches. Nature has produced not only the splendid men and women we know, but she has made the tiger and the microbes of diphtheria and tuberculosis. Furthermore, we cannot explain other species as imperfect stages of development. Microbes and tigers are not on the way to become men. As Bergson remarks, "it is abundantly evident that the rest of nature is not for the sake of man: we struggle like the other species, we have struggled against the other species. Moreover, if the evolution of life had encountered other accidents in its course, if, thereby, the current of life had been otherwise divided, we should have been, physically and morally, far different from what we are. For these reasons it would be wrong to regard humanity, such as we have it before our eyes, as prefigured in the evolu-

tionary movement. It cannot even be said to be the outcome of the whole of evolution, for evolution has been accomplished on several divergent lines, and while the human species is at the end of one of them, other lines have been followed with other species at their end." (C. E. 265.)

Now it is extremely curious that Bergson should in this paragraph so clearly state the difficulty with which many of us have long wrestled in vain and so decisively reject our interpretation of evolution, and yet on the very same page show how that difficulty is to be resolved and give, in a more adequate form, a restatement of that interpretation. To my mind, this page is one of the most interesting and valuable in the whole history of philosophy, as it indicates a way of escape from one of the most disquieting of antinomies. It is as follows:

"It is in a quite different sense that we hold humanity to be the ground of evolution. From our point of view, life appears in its entirety as an immense wave which, starting from a center, spreads outwards, and which on almost the whole of its circumference is stopped and converted into oscillation: at one single point the obstacle has been forced, the impulsion has passed freely. It is this freedom that the human form registers. Everywhere but in man,

consciousness has had to come to a stand; in man alone it has kept on its way. Man, then, continues the vital movement indefinitely, although he does not draw along with him all that life carries in itself. On other lines of evolution there have traveled other tendencies which life implied, and of which, since everything interpenetrates, man has, doubtless, kept something, but of which he has kept only very little. *It is as if a vague and formless being, whom we may call, as we will, man or superman, had sought to realize himself, and had succeeded only by abandoning a part of himself on the way.* The losses are represented by the rest of the animal world, and even by the vegetable world, at least in what these have that is positive and above the accidents of evolution.

“From this point of view, the discordances of which nature offers us the spectacle are singularly weakened. The organized world as a whole becomes as the soil on which was to grow either man himself or a being who morally must resemble him. The animals, however distant they may be from our species, however hostile to it, have none the less been useful traveling companions, on whom consciousness has unloaded whatever encumbrances it was dragging along, and who have enabled it to rise, in man, to heights from which it sees an unlimited horizon open again before it. It is true that it has not

only abandoned cumbersome baggage on the way; it has also had to give up 'valuable goods. Consciousness, in man, is pre-eminently intellect. It might have been, it ought, so it seems, to have been also intuition. Intuition and intellect represent two opposite directions in the work of consciousness: intuition goes in the very direction of life, intellect goes in the inverse direction, and thus finds itself naturally in accordance with the movement of matter. A complete and perfect humanity would be that in which these two forms of conscious activity should attain their full development." (C. E. 266-7.)

The italics in this passage are Bergson's own, but most of the other sentences are deserving of equal emphasis. For we are here told that *humanity is after all "the ground of evolution,"* that it is as if the great life had sought to realize itself, but its content was so rich that it was found impracticable to express the whole in our species. Just as no one of us can develop all of the latent potentialities of our childhood, as no man can hope to be a successful prize fighter and a great scholar, an Arctic or African explorer, a statesman, poet, financier, social leader, expert in scientific research and administrator of great estates all together, as personal development cannot proceed in all directions at once, so is it with the great life

of which we are partial manifestations. As chlorophyl-bearing organisms could not be developed into good animals, a division of labor was necessary which resulted in the vegetable and animal worlds. The two tendencies not being able to evolve together, each has gone its way. Evolution is thenceforth in two directions. Still Bergson himself admits that one of these is fundamental. He says: "But if, from the very first, in making the explosive, nature had for object the explosion, it is the *evolution of the animal, rather than that of the vegetable, that indicates, on the whole, the fundamental direction of life.*" (Italics mine. C. E., 116.)

As the storing of solar energy by separating atoms of carbon and oxygen was a function which could not well be performed by animals which were to keep "*the fundamental direction of life,*" the plants were specialized for that work, and *the animals continued in the upward path.* But the remaining possibilities were still so numerous, that it was impracticable to realize them in one species. One can no more be all kinds of an animal at once than one can at the same time be a highly developed animal and plant. The case is not different with the mind. Our intellectual development has been possible only at the partial sacrifice of our instinctive and intuitional possibilities. Still, humanity is actually the highest product that in the nature

of the case was possible. Although we are far from the ideal of "a complete and perfect humanity in which the two forms of conscious activity should attain their full development," the situation is not hopeless. For, says Bergson, man has kept something of everything he has lost, even if he has in some cases kept only very little. And there are in us still the rudiments of the intuitional powers which are what we need to round out and complete our mental life. Indeed, to show us what we have lost and how we may recover it, is precisely the Bergsonian conception of the function of philosophy.

What is now the result? We have scrupulously avoided forcing upon Bergson an arbitrary interpretation, and have aimed simply at getting at his meaning and the necessary implications of his doctrine, only to find that he merely qualifies, but does not really reject, what we have shown to be the meaning of evolution. He himself says that "the organized world as a whole becomes as the soil upon which was to grow either man himself or a being who morally must resemble him." In spite of our necessary losses by the way, and our incomplete and fragmentary nature now, *we have yet kept "the fundamental direction of life,"* and in us this great life has risen "*to heights from which it sees an unlimited horizon open again before it.*" We have escaped the dangers that have over-

whelmed all our companions on the great march; we have attained to the freedom toward which life has moved from the beginning; and we are still the thoroughfare through which life advances to unknown and unknowable possibilities. The great adventure is not over, there is hope of beating down all remaining resistances and clearing the most formidable obstacles, "*perhaps even death.*" As we look off into the blue, we may face the future with courage and hope. "Now are we the children of God, and it doth not yet appear what we shall be." And when we survey the past, the long ages when lower types contended with each other for the mastery, when we try to picture to ourselves the struggle and the suffering, we get some feeble sense of the "cost of the human." Biological reflection thus fills with new meaning the words of Paul,—“The earnest expectation of the creation waiteth for the revealing of the sons of God.”

CHAPTER XV

RELIGIOUS SIGNIFICANCE OF THE
BERGSONIAN CONCEPTION OF
EVOLUTION (*Concluded*)

If this teleological interpretation of evolution proves to be the most natural and rational we can think of, it is a very great matter. For there can hardly be any question that the thinking of educated people is to be more and more along evolutionary lines, and this for the simple reason that such thinking is the most effective. All fruitful work in science, in sociology, history and philosophy, is performed by those who view the subjects studied as phases of development. On the other hand, the religious needs of most people are deep and in many cases imperious, and a religious view of the world seems to involve teleology. That is, the aspiring life of men flourishes most when they are able to believe that, in some sense, the good is the cause of things, that reality is not a rigid mechanism but a life, the nature of which is akin to what we reverence and love. When

science, which is to-day regarded as an authority, is supposed to negative such a view, there is a painful schism in our lives. In such a case, men feel that they must give up either science or religion or keep them far apart in their minds. The first of these alternatives is often impossible, while the latter is always difficult and dangerous. A life so divided is deprived of its peace, its natural joyousness and its normal strength. *The ideal unification of life takes place when the thoughts that seem to us the most true are seen to have religious significance.* It is for this reason that a finalistic or teleological interpretation of evolution is so important. This is the dominant thought scheme, and it is therefore a great event in the history of thought when a thinker, a seer who looks at the vast process with fresh eyes, tells us that there is a meaning in evolution, that our lives are not mere epiphenomena, mean and transitory by-products, but that they give the whole process its significance.

It is perfectly true, however, that some of the clearest minds find Bergson's statement unsatisfactory. He is so reserved, so untheological in his mode of expression, and some of his statements denying ordinary teleology are so sweeping, that religious minds feel uncertain whether he is an enemy or a friend. Their attitude is well expressed by the English states-

man Balfour: "This free consciousness pursues no final end, it follows no predetermined design. . . . It is ignorant not only of its course, but of its goal; and for the sufficient reason that, in M. Bergson's view, these things are not only unknown but unknowable. . . . Creation, freedom, will,—these doubtless are great things; but we can not lastingly admire them unless we know their drift." Mr. Balfour is also like many other readers of the French philosopher in the obvious reluctance with which he makes the criticism, while confessing his gratitude to the eminent thinker, and frankly acknowledging his admiration for "this brilliant experiment in philosophic construction." The Rev. Charles F. Dole doubtless expresses the very natural perplexity of many, and their dissatisfaction with the theological vagueness of Bergson's thought, when he writes,—

"Bergson does not even try to tell us who God is, nor does he appear to have any use for the word. But he affirms his conviction of a mystery, more or less purposeful, but indescribable, and somewhat blind, which lies behind, and acts through, all the tortuous processes of evolving life. Has this mystery (or God) any moral character, that we may reverence it, or love it, or trust in its wisdom or goodness? Can it be truly said to love man, or care for man? Be-

fore such questions we stand as agnostics, so far as Bergson throws any light."

To this one might reply that the objection as to the absence of purpose in the life impulse is put too strongly. The critics might be reminded that Bergson, in one of his frequent summaries, says, "I see in the whole evolution of life on our planet an effort of this essentially creative force to arrive, by traversing matter, at something which is only realized in man, and which, moreover, even in man, is realized only imperfectly." If the full meaning of this statement, which is by no means an isolated one, but is truly representative of his thought, is comprehended, it is clear that Bergson has himself answered these critics. If the great life is striving towards something which is but imperfectly realized in humanity's highest types, it cannot be purposeless after all. Still, this answer does not satisfy, for the philosopher has been so emphatic in rejecting finalism as ordinarily understood that, despite his qualifications, he is naturally regarded as the opponent of all finalism.

It would, I think, be more to the point to say that what he rejects is the idea that life is the realization of a *fixed* plan, the mechanical adherence to a *fixed* order. The motto of those who would live in his spirit might be "Room for life!" He will not admit the mechanistic

theory with its assumption that "all is given," for he sees that spirit and life are not limited to what has been. For a similar reason, the thought is intolerable to him that in its onward march life must arrive at a predetermined goal, there being no chance of failure and nothing uncertain along the route. But, may we not say to him, this is not what we mean by having a purpose and striving toward a goal. No real purpose is so mechanical as that. At the age of sixteen, for example, we have certain ideals that serve as guides of our personal development; but at twenty-six we find that these ideals have changed, they have expanded and grown with our growth. Life in its progress not only realizes ideals, but it also produces and changes them. We know our direction, but our life purpose grows clearer to us as we advance. We are always finding out what we mean. This is the nature of life as we know it, of the only life we know anything about. Now I understand Bergson to say that something like this is true of the Great Life that lives in us, that it is not condemned to repeat forever what it knows, that it really evolves, creates, achieves, that is to say, that it *really lives*. Thus, when we consider the matter well, we have to admit that we have no experience of a purposive life which is nothing more than that realization of a fixed and detailed plan, that necessary following out

of a cut-and-dried programme, which is the object of Bergson's strictures. We have ends at which we hope to arrive, and general plans of action which are always modified in the course of their working out. I once undertook a piece of research work, in which it was necessary to invent apparatus and devise methods as I went along. The investigation corrected itself as it proceeded. Artists, painters and writers have similar experiences. In fact nearly all our purposive undertakings are more or less like that. We never foresee all the situations we actually have to meet in pursuing our goals. There is usually abundant need for all the ingenuity and inventiveness we can command. In short, *our human lives can be controlled by purpose, and still retain the adventurous nature by which Bergson sets such store.* Why may not the life of all our lives have a purpose in this sense, an "increasing purpose," as Tennyson says? And if it has, is it necessary for us to believe that it foresees every event along its future course? The Fourth Gospel represents Christ as saying to his disciples on the eve of his final departure, "And whither I go, ye know the way." That is all any of us knows,—*the way.* I understand Bergson to suggest that a similar thing may be true of the life from which we derive our own, and which we may naturally

and legitimately regard as not wholly different from our own, "since we are its offspring."

But even with these explanations and after generously giving Bergsonism credit for all that seems to be involved in it and that might be made out of it, the religious heart will still be troubled at the thought of so much change, even though that change be a process of creative evolution; for it worships "the Father of lights, with whom is no variableness, neither shadow of turning," and its constant prayer is, "O Thou who changest not, abide with me." This is a disquieting antinomy, with which we would have to deal, even if Bergson had written nothing. I offer no subtle explanation. Ingenious subtleties are usually evasions of great problems, not solutions. Nevertheless, there is one consideration that throws some light on our perplexity. We may fearlessly admit that the universe is unfinished, provided we remember that it cannot be finished in just any way. There is no caprice about the creative process, and the incomplete must be completed along the lines of growth.

Life as we know it, our individual and social life, is in the making, and our ideals light the way. But the relation of the ideal to the imperfect actual is not that of the unreal to the real. Our ideals are not alien, impertinent and

irrelevant, but spring out of our constitution. They are simply present tendencies carried further in the imagination; they are advanced, foreseen, desired, but yet unrealized stages of the present good. The actual world thus reveals its ideality in the aspirations of man. A human life retains its identity through all stages of its development. There is nothing capricious about normal growth or true freedom; but, according to Bergson, creative evolution means just the achievement of freedom, and is therefore a realization of ideals which are themselves the projection of actual tendencies and thus manifest the very nature of the real.

Finally, all those whose criticism practically amounts to a disappointment that Bergson has not told us more, and that he has left some of the great problems unsolved, ought to be reminded that he has himself pointed out that an adequate philosophy will be itself an evolution. All thinking men must work at it. No philosopher can perform the service for the race once for all. "A philosophy of this kind will not be made in a day. Unlike the philosophical systems properly so called, each of which was the work of a man of genius and sprang up as a whole, to be taken or left, it will only be built up by the collective and progressive effort of many thinkers, of many observers also, completing, correcting and improving one another.

So the present essay does not aim at resolving at once the greatest problems. It simply desires to define the method and to permit a glimpse, on some essential points, of the possibility of its application." (C.E. XIV.) More important, then, than the question, what results has Bergson reached through his method, is the question, what can we do with it? And in seeking an answer, it is natural to enquire into its history. Has it ever been used to good purpose? Bergson himself replies that it is through intuition that the great advances in philosophy have been made and the great works of art produced. "Philosophizing," he tells us, "just consists in placing one's self, by an effort of intuition, in the interior of concrete reality." Here and there in history have been men who have been splendidly endowed not only with that fragment of mind which we call intellect, in the narrow sense, but who have also had the power of vision, who have been able to install themselves within the great current of cosmic life and, so to speak, coincide with it for a few moments and get a glimpse of its flow. For an instant, the rhythm of their lives has been one with that of the cosmic spirit, of the creative activity, and they have felt the life of the whole, and known the heart of reality. In such rare experiences, the artist sees his ideal, and the philosopher gets that vision of the truth which is his con-

tribution to the world. There is no durable system that is not, at least in some of its parts, vivified by intuition. To be sure, what comes in this way must be put to the proof, it must be criticised, tested by logic, made intelligible to others, and finally incorporated into the great body of constructive thought.

The intuitive method is not easy to use. It is difficult to "put our being back into our will, and our will itself into the impulsion it prolongs, to feel that reality is a perpetual growth, a creation pursued without end." The experience never lasts long, but its value has no relation to its duration.

"We cannot kindle when we will
The fire that in the heart resides,
The spirit bloweth and is still,
In mystery our soul abides:
But tasks in hours of insight will'd
Can be through hours of gloom fulfill'd."

"Intuition, if it could be prolonged beyond a few instants, would not only make the philosopher agree with his own thought, but also all philosophers with each other. Such as it is, fugitive and incomplete, it is, in each system, what is worth more than the system and survives it."

The same thing is true of art, which Bergson says "is certainly only a more direct vision of

reality." What the philosopher has said on this subject, in the third chapter of his book on "Laughter," is one of the most interesting and suggestive things he has written. He there shows that we might all be transcendent artists, were it not for our utilitarian bias and practical habit of mind. Indeed, if we could enter into intimate communion with things and with ourselves, art would be useless, for then "our soul would continually vibrate in perfect accord with nature. Our eyes, aided by memory, would carve out in space and fix in time the most inimitable of pictures. Hewn in the living marble of the human form, fragments of statues, beautiful as the relics of antique statuary, would strike the passing glance. Deep in our souls we should hear the strains of our inner life's unbroken melody,—a music that is oftentimes gay, but more frequently plaintive and always original. All this is around and within us, and yet no whit of it do we distinctly perceive. Between nature and ourselves, nay, between ourselves and our own consciousness a veil is interposed: a veil that is dense and opaque for the common herd,—thin, almost transparent, for the artist and the poet."

The trouble with the most of us is not that we are not practical enough, but that we are such pragmatists, such hardened utilitarians, and are so completely conventionalized, that in-

stead of seeing actual things we usually "confine ourselves to reading the labels affixed to them." We have our system of classification into which everything must go, the individuality of things escapes us, and we are offended at new thoughts and original people. We even try to be conventional and socially proper even in our griefs. The spontaneous life is not allowed to well up within, but we are always asking ourselves what we think that other people think that we ought to think. The artist obeys his inner prompting. He dares to live, to see things as they are and not as they must be to conform to the traditional notion of the socially useful. "Poetic imagination is but a fuller view of reality." "Art is a breaking from society and a return to a pure nature."

Shakespeare, *e. g.*, was a master in the use of the intuitive method. He succeeded in placing himself by sympathy back in the great tide that bears us on, he felt and lived in imagination the many tendencies implicit within it. The same man could not be Macbeth, Hamlet, Othello, King Lear and the rest, but the great dramatist was able to *identify himself with the life that might have been any of these characters*. The true artist thus retraces the stream of life till he reaches and "lays hold of the potential in the real, and takes up what nature has left as a

mere outline or sketch in his soul, in order to make of it a finished work of art."

The great moral leaders of the race, I do not mean the ethical theorists, have also been men of vision. And so sure have they been that they saw truly that, in describing what they have seen, they have assumed to be spokesmen of reality itself. "Thus sayeth the Lord," the way the prophets begin their messages, is a perfectly natural mode of expression for men who feel that their life in its depths is one with the cosmic spirit, who understand that to speak the truth is not merely to utter a private opinion but to say what the universe is saying. This does not mean that they are not often mistaken. In fact, the greatest prophets of Israel were sometimes mistaken, but usually when they assumed to speak of world politics and other matters beyond the scope of their moral vision. The ideal prophet, the great spokesman of the moral consciousness and revealer of the truths that come through insight, is Emerson. The young people who come under his influence do not ask him for his credentials when he speaks to them of truth, sincerity, self-reliance, compensation, character and spiritual laws. For when he has pointed out great principles, others see them for themselves. His incomparable service is that he deepens and develops moral

insight; he helps us to see. As we read him, we are conscious of learning much, and yet we realize that we have learned nothing absolutely new. For all that he enables us to see with such beautiful clearness, we are conscious of having known in some dumb or inarticulate way before. The life was there, but it had not reached the stage of self-consciousness. But when Emerson holds up the moral ideal, we instantly know that that is what we have implicitly loved. Of every great seer we may truly and reverently say what is said of the master of the spiritual life,—“In him was life, and the life was the light of men.” As Martineau says, “Am I admitted to the company of greater and purer men, who move among the upper springs of life; who aim at what has scarcely visited my dreams; who hold themselves, with freest sacrifice, at the disposal of affections known to me only by momentary flash; who rise above the fears that darken me, and do the duties that shame me, and bear the sorrows that break me down? The whole secret and sanctity of life seem to burst upon me at once; and I find how near the ground is the highest I have touched, and how the steps of possibility ascend, and pass away, and lose themselves in heaven. This is the discipline, the divine school, for the unfolding of our moral nature,—the appeal of character without to character within. The

sacred poem of our own hearts, with its passionate hymns, its quiet prayers, is writ in invisible ink; and only when the lamp of other lives brings its warm light near do the lines steal out, and give their music to the voice, their solemn meaning to the soul." From all this, it is clear that the higher life of humanity, all that in us which makes us admirable and dear to one another, is awakened, stimulated, inspired and sustained by those masters of the intuitive methods, the prophets of the race.

What Bergson himself would say to this, I do not know. But it seems to me a legitimate application of his philosophy. If his ideas are true, men will not only read his books but, in the light of them, they will also re-read human history. This is true of all the books of the first order. But we have his explicit statement that the poets are among those who penetrate most deeply into the nature of reality. If, then, we turn to the great poets, we ought to be able to learn from them what we would see if, like them, we were more able to use the intuitive method which Bergson recommends. In other words, in their musical speech we ought to find a confirmation of the vision of life which the philosopher has strained the resources of the most wonderful prose speech to express. And in them, we shall see most clearly the religious significance of his philosophy. Opening a

volume of Wordsworth and turning to "Lines on Tintern Abbey," we seem to be reading Bergson translated in English poetry:

" Nor less, I trust,
To them I may have owed another gift,
Of aspect more sublime; that blessed mood,
In which the burden of the mystery,
In which the heavy and weary weight
Of all this unintelligible world,
Is lightened: — that serene and blessed mood,
In which the affections gently lead us on,—
Until the breath of this corporeal frame
And even the motion of our human blood
Almost suspended, we are laid asleep
In body, and become a living soul:
• While with an eye made quiet by the power
Of harmony, and the deep power of joy,
We see into the life of things."

The last three lines almost startle one who is familiar with Bergson's pages; with his insistence that instinct, which becomes intuition when it is developed, is sympathy; and with his admonition to place ourselves back in the primitive impulsion so that we can feel ourselves one with it and see its nature.

What is it, then, that Wordsworth sees in such inspired moments? In the same poem, he tells us that the passionate joy in the colors and forms of beautiful natural scenes which he had felt as a boy had subsided. The time

had passed for his youthful feeling and love of nature.

“ That had no need of a remoter charm,
By thought supplied, nor any interest
Unborrowed from the eye.”

Still he does not mourn the loss for which there was abundant recompense.

“ For I have learned
To look on Nature, not as in the hour
Of thoughtless youth; but hearing oftentimes
The still, sad music of humanity,
Nor harsh, nor grating, though of ample power
To chasten and subdue. And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man.
A motion and a spirit that impels
All thinking things, all objects of all thought,
And rolls through all things.”

What is this but the intuition of the cosmic spirit or life? What is this experience but the perennial source of religion? If Bergson ever seriously takes up the study of religion, I venture to believe that he will be surprised and delighted at the many noble passages such as this which may be found in English

poetry. If Samuel Johnson, for instance, had been the philosopher's disciple, how could he have better expressed both his spirit and his general world-view than in the noble lines :

“ Life of ages, richly poured,
Love of God, unspent and free,
Flowing in the prophet's word
And the people's liberty!

Never was to chosen race
That unstinted tide confined;
Thine is every time and place,
Fountain sweet of heart and mind.

Breathing in the thinker's creed,
Pulsing in the hero's blood,
Nerving simplest thought and deed,
Freshening time with truth and good,

Consecrating art and song,
Holy book and pilgrim track,
Hurling floods of tyrant wrong
From the sacred limits back,—

Life of Ages, richly poured,
Love of God, unspent and free,
Flow still in the prophet's word
And the people's liberty!”

Wordsworth makes repeated efforts to describe his experiences in the moments, which

were rare even for him, when he partially succeeded in using that part of the mind which is not intellect, but its complement. Thus, in "The Prelude" he writes:

"Gently did my soul
Put off her veil, and self-transmuted, stood
Naked, as in the presence of her God.
While on I walked, a comfort seemed to touch
A heart that had not been disconsolate:
Strength came where weakness was not known to be,
At least not felt; and restoration came
Like an intruder knocking at the door
Of unacknowledged weariness."

Now this was not simply the enjoyment of a quiet evening, for he continues:

"Of that external scene that round me lay,
Little, in this abstraction, did I see,
Remembered less; but I had inward hopes
And swellings of the spirit, was rapt and soothed,
Conversed with promises, had glimmering views
How life pervades the undecaying mind;
How the immortal soul with Godlike power
Informs, creates, thaws the deepest sleep
That time can lay upon her; how on earth,
Man, if he do but live the light
Of high endeavors, daily spreads abroad
His being armed with strength that cannot fail."

The reader of Bergson's first work, "Time and Free Will," a master-work in psychological analysis, will remember descriptions of in-

trospective experiences which differ from this chiefly in that they are expressed in the technical language of science. Take these words from "Creative Evolution," p. 199, "Let us then concentrate attention on that which we have that is at the same time the most removed from externality and the least penetrated with intellectuality. Let us seek, in the depths of our experience, the point where we feel ourselves most intimately within our own life. It is into pure duration that we then plunge back, a duration in which the past, always moving on, is swelling unceasingly with a present that is absolutely new." Read further what he has to say about the interpenetration of our experiences, the undifferentiated nature of our life as we draw nearer the source whence it unceasingly shoots forth, the vagueness of the tendencies that will become clear in the life of action. Now turn to the "Ode on Intimations of Immortality" and read the same thing. Wordsworth there speaks of

. . . "those obstinate questionings
Of sense and outward things,
Fallings from us, vanishings;
Blank misgivings of a creature
Moving about in worlds not realized,
High instincts before which our mortal nature
Did tremble like a guilty thing surprised;
But for those first affections,

Those shadowy recollections,
Which, be they what they may,
Are yet the fountain light of all our day,
Are yet a master light of all our seeing."

There are probably few with the power of appreciation of what is great in literature who would say that there is any prose in any language more excellent than Bergson's; but, though poetry and prose are incommensurable, those who care both for philosophy and noble speech must admit that the poet has equaled the philosopher in the beauty of the expression which he has given of their common vision.

In a former chapter, I was speaking of the way our conceptual thought interferes with our perceptions, so that we call the grass green because we think it is and must always be so. Bergson and Wordsworth both make a great deal of the kindred fact that custom and habit and intellectual bias hinder our native power of insight. The poet thus addresses the child,

"Thou best philosopher, who yet dost keep
Thy heritage; thou eye among the blind,

On whom those truths do rest
Which we are toiling all our lives to find."

This beautiful phase of life will swiftly pass, and the child become conventionalized and intellectualized like the rest of us.

" Full soon thy soul shall have her earthly freight,
And custom lie upon thee with a weight,
Heavy as frost, and deep almost as life! "

It thus appears that into art and philosophy, as into the Kingdom of Heaven, we can enter only by becoming as little children.

Robert Browning, because of his anti-intellectualism, was heavily handicapped in his work as a poet. His was the idealism, not of thought, but of love. Still, like everybody else, he happily failed of perfect consistency, and so occasionally reached the heights where poetry and philosophy are seen to be but prose and poetic versions of the same world. He tells us that God

" Dwells in all
From life's minute beginnings, up at last
To man — the consummation of this scheme
Of being, the completion of this sphere of life."

He has used his intuitive powers, and thus reports the experience:

" I knew. I felt . . .

What God is, what we are,
What life is — how God tastes an infinite joy
In infinite ways — one everlasting bliss,
From whom all being emanates, all power
Proceeds; in whom is life for evermore,
Yet whom existence in its lowest form
Includes."

When he looks within, he finds what the author of "Time and Free Will" declares that he has found. The nearer we get to the springs of life, the deeper our sense of vague, undifferentiated and undeveloped tendencies or potentialities,

"instincts immature, all purposes unsure,"
together with

"August anticipations, symbols, types,
Of a dim splendor ever on before
In that eternal circle life pursues."

But there is one more respect in which the spirit of Browning is like that of Bergson. For both life is first of all an adventure. The philosopher has a deep sense of the "infinite richness" of life. He cannot bear the suggestion of a mechanical scheme. He rejects the suggestion of finality, even that of a plan, saying that "the portals of the future remain wide open." Life is movement, creation, adventure.

"Onward, onward, follow the gleam."

For the poet, life has been an enterprise, a series of conflicts and triumphs. Even his faith has been won, achieved. And when he leaves us, it is as a happy warrior setting forth in search of new adventures:

"Life's struggle having so far reached its term,
Thence shall I pass, approved

A man, for aye removed
From the developed brute: a god though in the germ.
And I shall thereupon
Take rest, ere I be gone
Once more on my adventure, brave and new:
Fearless and unperplexed
When I wage battle next,
What weapons to select, what armor to endue."

David A. Wasson's magnificent poems, "All's Well," and "Seen and Unseen," voice the exultation of a life that feels itself one with an all-conquering life. The following lines are from the latter poem. The poet is on a sailing vessel, facing head winds, and though the voyage lengthens out from days to weeks, he feels that his life is not like the baffled ship, but keeps its course as it sails another sea.

"The winds that o'er my ocean run
Reach through all worlds beyond the sun;
Through life and death, through fate, through time.
Grand breaths of God they sweep sublime.

Eternal trades, they cannot veer,
And, blowing, teach us how to steer;
And well for him whose joy, whose care,
Is but to keep before them fair.

O thou God's mariner, heart of mine!
Spread canvas to the airs divine!
Spread sail! and let thy Fortune be
Forgotten in thy Destiny.

.

Life loveth life and good; then trust
What most the spirit would, it must;
Deep wishes, in the heart that be,
Are blossoms of Necessity.

A thread of Law runs through thy prayer
Stronger than iron cables are;
And Love and Longing toward her goal
Are pilots sweet to guide the soul.

So life must live, and Soul must sail,
And Unseen over Seen prevail;
And all God's argosies come to shore,
Let ocean smile, or rage or roar.

And so, 'mid storm or calm, my bark
With snowy wake still nears her mark;
Cheerily the trades of being blow,
And sweeping down the wind I go."

In making these quotations from this beautiful poem, I do not, of course, mean to suggest that anything so triumphant in tone can be found in Bergson's writing. The point is that this is the tone of those *masters of the intuitive method*, the nobler poets. It is significant that they and the prophets and religious leaders of the race have had the intuition of a great life with which they have felt their essential oneness, and through this conscious unity have attained to a victorious, even exultant spirit, to strength and courage, gladness and peace. This is

generally the tone of healthy life, even when it is not thoughtful. The pessimists among philosophers and religious teachers have nearly all been either sick, or embittered by unhappy personal experiences, or they have been surrounded by wretched social conditions. They have generalized too widely from the exceptional and abnormal. The fact is that even conceptual thought, when it reaches a certain elevation, like healthy life begins to sing. Aristotle, usually so sober and judicious, the very type of the thinker, becomes dithyrambic when, in a famous passage in his "Metaphysics," and also in his "Ethics," he considers the blessed life of God, which is altogether such as the thinker's life is in his moments of rapt vision. So Kant, the critical philosopher par excellence, the unemotional analyzer of the mental apparatus, utters exclamations of enthusiasm when he considers the starry heavens and the moral law.

The greatest height human life can reach lies at the point where the intuitions of the cosmic life are blended with the conceptual view of the universe worked out by science, when each is interpreted in the light of the other and both are united in *that philosophic view of reality which is the very truth, and which, because the truth is a vision of the good, naturally and inevitably expresses itself in noble and musical*

speech, and in strong, beautiful and courageous lives. The songs which will be sung by those who are at once the poets of spiritual insight and of evolution are just beginning to be written. I select one which may serve as an example and a type. The results of science, of conceptual thought, the world-process as it appears to the intellect, are here set forth together with the meaning of it all as perceived by religious intuition, as known to the understanding heart. The philosophy of Bergson has not reached this point, but it is in this direction that it and all the clearest and best in modern thinking moves.

“ He hides within the lily
A strong and tender care,
That wins the earth-born atoms
To glory of the air;
He weaves the shining garments
Unceasingly and still,
Along the quiet waters,
In niches of the hill.

We linger at the vigil
With him who bent the knee
To watch the old-time lilies
In distant Galilee;
And still the worship deepens,
And quickens into new,
As brightening down the ages
God’s secret thrilleth through.

O Toiler of the lily,
Thy touch is in the man!
No leaf that dawns to petal
But hints the angel plan.
The flower horizons open!
The blossom vaster shows!
We hear thy wide worlds echo,—
See how the lily grows!

Shy yearnings of the savage,
Unfolding thought by thought,
To holy lives are lifted,
To visions fair are wrought;
The races rise and cluster,
And evils fade and fall,
Till chaos blooms to beauty,
Thy purpose crowning all!"

WILLIAM C. GANNETT.



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